
IN THE
United States Circuit Court of Appeals
FOR THE NINTH CIRCUIT.

CLAYTON T. EAID and JOSEPH A. McCONNELL,
Appellants,

vs.

TWOHY BROS. COMPANY, a corporation, THE
NORTHWESTERN EQUIPMENT COMPANY,
a corporation, and ELBERT G. CHANDLER,
Appellees.

TRANSCRIPT OF RECORD.

Upon Appeal from the District Court of the
United States for the District of Oregon.

Filed

MAR 29 1915

F. D. Monckton,

Clerk

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*In the United States Court of Appeals for the Ninth
Circuit.*

Names and Addresses of the Attorneys of Record:

GEORGE W. STAPLETON and RICHARD
SLEIGHT, Yeon Building Portland, Oregon, and
JOSEPH L. ATKINS, Chamber of Commerce
Building, Portland Oregon, for the Appellants.

W. R. LITZENBERG, Wilcox Building, Portland,
Oregon, for the appellees.

Citation on Appeal

United States of America,
District of Oregon,—ss.

To Twohy Bros, Company, The Northwestern Equipment Company and Elbert G. Chandler,
Greeting:

Whereas, Clayton T. Eaid and Jos. A. McConnell, has lately appealed to the United States Circuit Court of Appeals for the Ninth Circuit from a decree rendered in the District Court of the United States for the District of Oregon, in your favor, and has given the security required by law;

You are, therefore, hereby, cited and admonished to be and appear before said United States Circuit Court of Appeals for the Ninth Circuit, at San Francisco, California, within thirty days from the date hereof, to show cause, if any there be, why the said decree should not be corrected, and speedy justice should not be done to the parties in that behalf.

Given under my hand, at Portland, Oregon, in said District, this 27 day of October in the year of our Lord, one thousand, nine hundred and fourteen.

R. S. BEAN,

Judge.

State of Oregon,
County of Multnomah,—ss.

Due service of the copy of the within, admitted
at Portland, this 28th day of October, 1914.

W. R. LITZENBERG,
Atty. for Defts.

Filed October 28, 1914. G. H. Marsh, Clerk.

*In the District Court of the United States for the
District of Oregon.*

November Term 1913.

Be it remembered, that on the 15th day of December, 1913, there was duly filed in the District Court of the United States for the District of Oregon, a Bill of Complaint, in words and figures as follows, to wit:

Bill of Complaint.

*In the District Court of the United States for the
District of Oregon.*

CLAYTON T. EAID, and JOS. A. McCONNELL,
Plaintiffs,

vs

TWOHOY BROS. CO., a corporation, JOHN
TWOHOY, THE NORTHWEST EQUIPMENT
CO., a corporation, and ELBERT G. CHAND-
LER,

Defendants.

To the Judges of the District Court of the United States for the District of Oregon:

Clayton T. Eaid, of Portland, Oregon and Jos. A. McConnell, of Dallas, Oregon, each residents and citizens of the State of Oregon, bring this their Bill against Twohy Bros. Co., a corporation organized under the laws of the State of Oregon, and John Twohy, of Portland, Oregon, Northwest Equipment Co., a corporation and E. G. Chandler, each residents and citizens of the State of Oregon, and inhabitants of the District of Oregon, and for cause of suit plaintiffs allege as follows:

I.

That heretofore, on the 24th day of January, 1908, plaintiff Jos. A. McConnell was the true, original and first inventor of a certain new and useful chock attachment for cars not known or used by others in this country before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, or more than two years prior to his application for patent therefor hereinafter recited, and not in public use or on sale in this country for more than two years prior to his application for patent therefor hereinafter recited; and that no application for a foreign patent for said invention was filed more than twelve months prior to the filing of the application for the hereinafter recited patent in this country.

II.

That the said Jos. A. McConnell being as aforesaid the inventor of said improvement and being a citizen of the United States, made application to the proper department of the Government of the United States, to-wit, the Commissioner of Patents, for letters patent in accordance with the then existing acts of congress, and having complied in all respects with the conditions and requirements of said acts on the 20th day of October, 1908, letters patent of the United States no. 901815, signed, sealed and executed in due form of law for said invention or discovery were issued and delivered to the said Jos. A. McConnell, whereby there was secured to him and to his heirs, legal representatives and assigns for the term of seventeen years from the 20th day of October, 1908, the full and exclusive right of making, using and vending said improvement to others to be used, which said letters patent are now of record in the patent office of the United States, and a certified copy of which is ready here in court to be produced.

III.

That a description or specification of the aforesaid improvement was given in the schedule to the aforesaid letters patent, accompanied by said drawings referred to in such schedule and forming a part of said letters patent. The said letters patent and the said specifications thereto annexed which, or an exemplified copy of which plaintiff will produce as

directed by this court, were duly recorded in the patent office.

IV.

That by an instrument in writing bearing date June 28, 1913, the said Jos. A. McConnell duly assigned, transferred and set over unto the plaintiff, Clayton T. Eaid, a one fourth interest in and to the said invention and letters patent for, to and in the entire United States and all of its states and territories, to be held and enjoyed by him for the life of said patent, which assignment was duly recorded on November 17, 1913, in the patent office of the United States in Liber Z93, page 79 of Transfers of Patents as by said assignment with the certificate of recording thereto affixed or a duly certified copy of said assignment in court to be produced will more fully appear, and the plaintiffs are now the exclusive owners of said letters patent and of the invention and improvement therein described, and claim and own all rights secured by said letters patent since the date thereof, and are entitled to be protected in the enjoyment of the same.

V.

Yet the said defendants, well knowing the premises and the rights secured to your orators, as aforesaid, but contriving to injure your orators, and to deprive them of the benefits and advantages which might and otherwise would accrue unto them from said invention after the issuing of the letters patent

and after the vesting of the same in your orators, as aforesaid, and before the commencement of this suit, did as your orators are informed and believe, without the license or allowance and against the will of your orators, and in violation of their rights and in infringement of the aforesaid letters patent within the District of Oregon and elsewhere in the United States unlawfully and wrongfully, and in defiance of the rights of your orators, make, construct, use, and vend to others to be used, chock attachments for cars made according to and employing and containing said invention and that they still continue so to do; and that they are threatening to make the aforesaid chock attachments for cars in large quantities and to supply the market therewith and to sell the same.

All in defiance of the rights acquired by and secured to your orators, as aforesaid, and to their great and irreparable loss and injury, and by which they have been and still are being deprived of great gain and profits which they might and otherwise would have obtained, and which have been received and enjoyed, by the said defendants by and through their aforesaid unlawful acts and doings.

VI.

And your orators further show unto Your Honors, on information and belief, that said defendants have sold large quantities of said chock attachments for cars, and still have a large quantity on hand which

they are still offering for sale, and have made and realized large profits and advantages therefrom; but to what extent and how much exactly your orators do not know, and pray a discovery thereof. And your orators say that the use of said invention by said defendants and their preparation for and avowed determination to continue the same, and their other unlawful acts as aforesaid, in disregard and defiance of the rights of your orators, have the effect to and do encourage and induce others to venture to infringe said patent in disregard of your orators' rights.

And your orators further show unto your Honors that they have caused notice to be given to said defendants of said infringements and of the rights of your orators in the premises, and requested them to desist and refrain therefrom; but they, the defendants, have disregarded said notice and refused to desist from said infringements, and still continue to make, use and sell said chock attachment for cars.

And forasmuch as your orators have no adequate relief except in this court, to the end that the defendants may be compelled to account for and to pay over the income thus unlawfully derived from the violation of the rights of your orators as above, and be restrained from any further violation of said rights, your orators pray that Your Honors may grant a writ of injunction, restraining the defendants and each of them from any further construction, or sale or use in any manner of said patented invention or any part thereof, in violation of the rights of your orators as afore-

said, and that the chock attachment for cars now in the use of the said defendants may be destroyed, or delivered up to your orators for that purpose. And also, that Your Honors, upon the entering of a decree for infringement, as above prayed for, may proceed to assess, or cause to be assessed under your direction, in addition to the profits to be accounted for by the defendants as aforesaid, the damages your orators have sustained by reason of such infringement, and that your Honors may increase the actual damages so assessed to a sum equal to three times the amount of such assessment, under the circumstances of the wilful and unjust infringement by the said defendants as herein set forth.

And your orators also pray for a provisional or preliminary injunction, and for such other relief as the equity of the case may require, and as to your honors may seem meet.

CLAYTON T. EAID &
JOS. A. McCONNELL

Complainants.

STAPLETON & SLEIGHT

Solicitors for Complainants

JOS. L. ATKINS

Of Counsel.

United States of America,
State of Oregon,
County of Multnomah,—ss.

On the 15th day of December, 1913, at Portland, in the County and State aforesaid, before me

personally appeared Clayton T. Eaid, and solemnly affirmed that he has read the foregoing Bill and knows the contents thereof, and verifies this complaint for himself and his co-plaintiff, and that he knows that the same is true of his own knowledge, except as to matters therein stated on information and belief, and as to those matters he believes them to be true, and thereupon subscribed the same.

[seal]

H. B. EDWARDS

Notary public within and for the
County of Multnomah, State
of Oregon.

Filed December 15, 1913. A. M. Cannon, Clerk.

And afterwards, to wit, on the 9th day of January; 1914, there was duly filed in said Court, and Cause an Answer, in words and figures as follows, to wit:

Answer.

Come now the defendants above named and for answer to the plaintiffs' Bill of Complaint, admit, deny and allege as follows,—

I.

In answer to paragraph I of the Bill of Complaint, these defendants allege that they have no knowledge of information sufficient to form a be-

lief as to whether any of the allegations therein contained are true, and therefore they deny the same and each and every of the allegations thereof.

II.

In answer to paragraph II of the Bill of Complaint, these defendants allege that they have no knowledge or information sufficient to form a belief as to whether any of the allegations therein contained are true, and therefore they deny the same and each and every of the allegations thereof, except that these defendants admit that on the 20th day of October, 1908, letters patent of the United States, No. 901,815, were issued to Joseph A. McConnell.

III.

In answer to paragraph III of the Bill of Complaint, these defendants allege that they have no knowledge or information sufficient to form a belief as to whether the allegations therein contained are true, and therefore they deny each of them.

IV.

In answer to paragraph IV of the Bill of Complaint, these defendants allege that they have no knowledge or information sufficient to form a belief as to whether any of the allegations therein contained are true, and therefore they deny the same and each and every of the allegations thereof.

V.

In answer to paragraph V of the Bill of Complaint, these defendants deny that they, or that any of them, have in any manner whatsoever contrived, or that they are contriving, to injure plaintiffs, or to deprive them of any benefits and advantages whatsoever, or which may be secured to them by the letters patent referred to, and deny that they have in any manner infringed said letters patent referred to, in the district of Oregon, or elsewhere in the United States; and deny that they have unlawfully or wrongfully, or in defiance of any rights of plaintiffs, made, constructed, used or sold to others to be used, any chock attachments for cars, made according to and employing and containing said alleged invention, and deny that they still continue so to do, or that they are threatening to make any chock attachments for cars, in large quantities, or in any quantity whatsoever, which in any manner infringe upon said alleged letters patent.

And defendants deny that, in defiance of any rights secured to plaintiffs, they have deprived, or that they are depriving plaintiffs of great gain and profits, or of any gain or profit, which they might and otherwise would have obtained; and defendants deny that they have received and enjoyed, or that they are receiving and enjoying, any gains or profits by and through any unlawful acts and doings.

VI.

In answer to paragraph VI of said Bill of Complaint, defendants deny that they have sold large quantities, or any quantity whatsoever, of any chock attachments for cars which infringe the letters patent referred to, and deny that they have on hand, or that they are offering for sale any such chock attachments; deny that they have realized large profits and advantages from the sale of any chock attachments which infringe said letters patent; deny that they are using, or that they have made or are making any preparation to use, any invention which in any way infringes the letters patent referred to by plaintiffs, and deny that they are guilty of any unlawful acts as alleged in said Bill of Complaint, in disregard and defiance of any rights secured to said plaintiffs, or which can have the effect of encouraging and inducing others to venture to infringe said letters patent referred to.

Defendants deny that plaintiffs, or either of them have caused notice to be given to said defendants, or to any of them, of any alleged infringement, and deny that plaintiffs requested them to desist and refrain from any alleged infringement; deny that they have received any notice or refused to desist from any alleged infringement; and deny that they continue to make, use and sell any chock attachment for cars which can be construed to infringe the letters patent referred to by plaintiffs.

For further answer, and affirmative defence to the Bill of Complaint, defendants allege,—

VII.

That upon an application for letters patent, duly and regularly made and filed by the defendant, Elbert G. Chandler, in the United States Patent Office, under date March 7, 1913, and the payment of the fees required by law, Letters Patent No. 1,066,795, in due and regular form, were issued, under date July 8, 1913, to said Elbert G. Chandler, for improvements in Log Bunks; that the same are now in his possession and ready to be produced when required, securing to defendant Chandler and to his licensees for the full term of seventeen years from the date thereof, the full and exclusive right to make, use and sell the improvements in Log Bunks therein described, illustrated and claimed; that the Log Bunks made and sold by these defendants, or by any of them, have been made and are being made under the authority of the rights secured by said letters patent and according to the specifications fully set forth therein; that said Log Bunk, as fully illustrated, described and claimed in said letters patent, and as made by these defendants, does not infringe the alleged letters patent referred to and claimed to be owned by the plaintiffs herein; that these defendants have acted in the utmost good faith, protected by the laws of the United States, and have acted under the authority thereof, and without violation of the rights of the plaintiffs, or of any persons whomsoever.

Wherefore, these defendants, for the reasons hereinabove recited respectfully submits that they ought not to be decreed to account to the complainants for, or to pay anything to them in the nature of profits or damages, or be enjoined or restrained as in the said bill of complaint prayed.

These defendants submit to this Honorable Court that said complainants have the right to no other or further answer to said Bill of Complaint than is herein contained and have no right to an injunction, decree or other relief prayed for in said Bill of Complaint;

All of which matters and things these defendants are ready and willing to aver, maintain and prove as this Honorable Court may direct and it humbly prays to be hence dismissed with its reasonable costs and charges in this behalf most wrongfully sustained.

TWOHY BROS. CO.

JOHN TWOHY,

THE NORTHWESTERN EQUIPMENT CO.

ELBERT G. CHANDLER,

Defendants,

By

(Sgd) ELBERT G. CHANDLER

One of Defendants.

W. R. LITZENBERG

Solicitor for Defendants.

State of Oregon,

County of Multnomah.—ss.

On this 8th day of January, 1914, in the City of Portland, County of Multnomah, and State of Ore-

gon, before me, a Notary Public in and for said State and County, personally appeared Elbert G. Chandler, and solemnly affirmed that he has read the foregoing answer and knows the contents thereof, and verifies this answer for himself and for his co-defendants, and says that he knows that the same is true of his own knowledge, except as to the matters therein stated on information and belief, and as to those matters he believes them to be true.

(Seal)

R. B. FRENCH

Notary Public within and for the
State of Oregon,
County of Multnomah.

District of Oregon,
County of Multnomah.—ss.

Due service of the within answer is hereby accepted in Portland, Multnomah County, Oregon, this 8th day of January, 1914, by receiving a copy thereof, duly certified to as such by W. R. Litzenberg, Attorney for Defendants.

R. SLEIGHT

of Attorneys for Plaintiffs.

Filed January 9, 1914. A. M. Cannon, Clerk.

And afterwards, to wit, on the 10th day of August, 1914, there was duly Filed in said Court, and cause an OPINION, in words and figures as follows, to wit:

Opinion.

Stapleton & Sleight and Joseph Atkins for Plaintiffs, William R. Litzenberg for Defendants.

Wolverton, District Judge:

The complainants are the owners of certain letters patent for a log bunk, No. 901,815, issued October 20, 1908, and allege infringement by the defendants, who are manufacturing a log bunk under and in pursuance of letters patent issued to Elbert G. Chandler July 8, 1913, being No 1,066,795. The former will be referred to as the McConnell and the latter as the Chandler patent.

The McConnell patent consists of two parallel beams which are disposed crosswise of a car, and are detachably affixed thereto. Between and on the outer side of these beams are arranged rods so disposed as to operate a chock upon the opposite side of the car, so that when the car is loaded with logs the chock may be lowered, and thus release the logs, by which they are dumped from the car. Between the beams, and secured to the opposing faces thereof, are combined guiding and stop devices, each of which consists of a face-plate having an integral longitudinally extending ratchet-bar, and also a longitudinally channeled guide formed integral with the face-plate, located above but beyond the ratchet-

bar. Interposed between the stop devices of each pair is a chock consisting of a bowed or curved arm, having trunnions, designed to travel with the guides. Those portions of the trunnions outside of the guides and above the ratchet-bars are provided with cam faces, terminating in shoulders, so designed that when the chock is swung upward they turn downward into engagement with the adjoining teeth of the ratchet-bar. An arm extends downward from each of the chocks, and pivotally connecting with it is a rod called a link, having a series of apertures, any one of which is designed to receive a wrist or pin on the extended chock. The link is connected to a crank-arm located in the center of the car, extending from a cross-shaft. From the other side of the car is another rod, which is connected with the shaft by another crank-arm, and through the co-operation of these two rods the chock is operated in releasing it for dumping the logs. The crank-arms are so arranged or disposed that when the chock is set between the ratchet-teeth, in a position for holding the logs, the chock cannot be lowered, when the pressure of the logs is against it, except by pulling the co-operating rods outwardly. The chocks are slidable in the channeled guides, and when lowered may be adjusted to suit the size of the logs being loaded, but not when elevated or locked. The operation for unloading is by a handle on the outer and opposite end of the rods.

The Chandler patent has side-beams, as in the McConnell, secured to the inside of the beams at

each end of the bunk, and opposite each other are bracket-members, having corrugated or notched upper edges. Beneath the bracket-member on one side is hinged a swinging plate, and on the other side a flange-like portion. A chock is provided having trunnions, movably and changeably mounted in the notches of the bracket members, the upper end of the chock being adapted to project above the top of the beams or supporting surface of the bunk, and the lower end being provided with a lip or flange portion, there being a chock at each end of the bunk. The opposite side of the lower extension of the chock has a cleat which co-operates with the flange portion of the opposite bracket above described. The operation of the chock to hold it in position for receiving the load is effected by means of a rod extending from one end of the bunk to the other underneath the swinging plate, the rod having off-set portions, so adjusted with reference to the swinging plate as that when the rod is turned in one direction, it raises the swinging plate so that the lip on the lower extension of the chock comes into engagement with it, and the chock is held in place against pressure from the load. The rod is provided with a handle for its adjustment, and, when revolved in the opposite direction, the swinging member is allowed to drop down, and the chock, being released, falls back, and the load is liberated. The chock can be moved outwardly or inwardly, whether the rod and swinging member are in position for holding the chock in place for receiving the load or not.

The only question in the case is whether use under the Chandler patent is an infringement of the McConnell patent.

The issuance by the patent office of a more recent patent engenders a presumption *prima facie* that there is a patentable distinction or difference between the later and the earlier devices. The presumption, however, is not conclusive, as the question is still open for judicial inquiry. *Electric Candy Machine Co. v. Morris*, 156 Fed. 972, 975.

Claim one in the McConnell patent includes fixed means for engaging the chocks when elevated only, to hold them against sliding movement in one direction, and means carried by the beams for actuating the chocks. Claim ten includes stop devices for engagement with the chock when in one position, and means for lowering the chock, to disengage it from said devices, and for sliding the chock while in a lowered position. The fixed means for engaging the chock are the ratchet-teeth, and the engagement is effected when the chock is elevated only. This holds the chock against sliding movement in one direction. The means carried by the beams for actuating the chock are the rods and their mechanism, with the cross-shafts and crank-arms. In claim ten, the stop devices for engagement with the chock when in one position are again the ratchet-teeth. This is the same element as in claim one, except that the words "when elevated only" are omitted. The means for lowering the chock to disengage it from

said devices are also the means carried by the beams for actuating the chocks; the same element as in claim one. The means for sliding the chock are the guides, which direct the movement of the chock. The chock may be slid in either direction to suit the size of the load to be carried, but this only when the chock is lowered, and positively not when in an elevated position. For in the latter position the cam prevents movement in one direction, and, in practical operation, in either direction.

It is claimed that the plaintiffs' bunk is a primary invention in the art, and that plaintiffs are entitled to a wide range of equivalents as it pertains to the means for actuating and lowering the chock, and that the means employed by the Chandler patent for engaging and disengaging the chock are mere mechanical equivalents of the means employed in plaintiffs' device. The means employed by the latter, it must be conceded, are very different from those of the former. In the Chandler patent we find the rod, with set-off as, and by partial revolution the set-offs engage the swinging member, and raise the latter so that when the chock is in an elevated position the lip of its lower extension engages the swinging member, and locks the chock as pressure is brought against it. This is obviously different from the mechanism that engages and disengages the chock in the McConnell device, which is effectuated by rods, with their mechanism, that are pushed and pulled endwise, and cooperate with the chock in a different way. I am inclined to think that the means so employed in the

Chandler device are not mechanical equivalents of those in the McConnell.

But this is not all. The Chandler device is a marked advance upon the McConnell device. The ratchet and the stop devices accompanying the McConnell patent are wanting in the Chandler. If it be said that the bracket-seats in the Chandler device are stop devices, then the chock is always in engagement with them, and not when in an elevated position only. The chock can be adjusted at all times by moving it forward or back, whether in an elevated position or not, and whether the means for engaging the chock are set or not. The movement consists in raising the chock from the bracket-seats in which it rests and dropping it into others, and cannot be appropriately termed a sliding movement.

I have not alluded to claims other than the first and tenth in the McConnell patent, because the others are all narrower than these two.

Upon the whole, I am impressed that the devices for engagement with the chock, the mechanism for the convenient adjustment of the chock, and the means for engaging and disengaging are not mechanical equivalents in the one patent as compared with the other. Two devices that do the same work in substantially the same way, and accomplish substantially the same result, are mechanical equivalents, though they may differ in name, form, or shape. *Machine Co. v. Murphy*, 97 U. S. 120, 125.

But it cannot be said of the Chandler device that it does the work in substantially the same way, although accomplishing a result which is the same in either case. Such being the case, there is no infringement of the McConnell patent by use of the Chandler patent.

And afterwards, to wit, on Wednesday, the 12th day of August, 1914, the same being the 33rd Judicial day of the Regular July, Term of said Court; Present: the Honorable Charles E. Wolverton, United States District Judge presiding, the following proceedings were had in said cause, to-wit:

Final Decree.

This cause having been brought on to be heard at this term, and upon the pleadings and proofs on file herein, and having been argued by Joseph Atkins for Plaintiffs, and William R. Litzenberg for Defendants, respectively, and upon consideration thereof, it is ordered, adjudged and decreed:

That there is no infringement of the McConnell patent by the defendants in making the Chandler bunk, and the Bill of Complaint is hereby dismissed.

That the defendants recover their costs in this suit.

CHARLES E. WOLVERTON

Judge.

Signed this 12th day of August, 1914, at Portland, Oregon.

And afterwards, to wit, on the 27th day of October, 1914, there was duly Filed in said Court, a Petition for Appeal, in words and figures as follows, to wit:

Petition for Appeal.

To the Honorable Robert S. Bean, District Judge:

The above named plaintiffs, Clayton T. Eaid and Joseph A. McConnell, conceiving themselves aggrieved by the decree entered herein August 12, 1914, by which it was decreed that the defendants herein had not infringed the patent under which the plaintiffs claim, and that the plaintiffs were not entitled to the relief demanded in the complaint, and that the defendants recover from the plaintiffs their costs and disbursements, do hereby appeal from said decree, and from the whole thereof, to the United States Circuit Court of Appeals for the Ninth Circuit for the reasons specified in the assignment of errors herewith filed, and pray that the appeal may be allowed and that a transcript of the record, proceedings and papers on which said decree was made duly authenticated may be sent to the United States Circuit Court of Appeals for the Ninth Circuit, and that pending the determination of said appeal said decree be suspended as to the payment of costs by plaintiffs upon their giving a bond in such sum as shall be fixed by the court.

Dated Oct. 26th 1914.

STAPLETON & SLEIGHT &

JOS. L. ATKINS,

Attys. for Plaintiffs.

Filed October 27, 1914. G. H. Marsh, Clerk.

And afterwards, to wit, on the 27th day of October, 1914, there was duly filed in said Court and Cause, an Assignment of Errors, in words and figures as follows, to wit:

Assignment of Errors.

The above named plaintiffs assign the following errors upon the decree herein which was entered August 12, 1914.

I

In decreeing that the plaintiffs are not entitled to the relief prayed for in the complaint.

II

In decreeing that the McConnell patent set forth in the complaint and therein sued upon is not infringed by the structures and log bunks manufactured by the defendants.

III

In decreeing that the plaintiffs were not entitled to an injunction restraining defendant from continuing to manufacture or sell said structures and log bunks manufactured by them under the Chandler patent.

IV

In decreeing that the subject matter of the Chandler patent is substantially different from that defined in the claims of the McConnell patent, severally.

V

In decreeing that the Chandler device is a marked advance upon the McConnell device.

VI

In failure to recognize the prior state of the art upon which the McConnell patent is predicated.

VII

In failure to ascribe to the McConnell patent its proper relationship to the prior art.

VIII

In failure to allow to the McConnell patent the full benefit and scope of the language of the claims, in construing the same.

IX

In denying to the McConnell patent that liberal interpretation to which it is entitled under the law.

X

In failure to extend the application of the doctrine of equivalents to the claims of the McConnell patent, *seriatim*, in determining their scope.

XI

In reading into claim 1, line 6 of the McConnell patent a comma after the word "only" where none appears in the patent.

XII

In limiting the construction of claim 1 of the McConnell patent upon the interpolation of a comma after the word "only" in line 6 thereof.

STAPLETON & SLEIGHT &
JOS. L. ATKINS,

Attys. for plaintiffs.

Filed October 27, 1914. G. H. Marsh, Clerk.

And afterwards, to wit, on Tuesday, the 27th day of October, 1914, the same being the 98th Judicial day of the regular July, term of said Court; Present: the Honorable ROBERT S. BEAN, United States District Judge presiding, the following proceedings were had in said cause, to-wit:

Order Allowing Appeal.

Upon reading and filing the petition of the above named plaintiff, for an order allowing an appeal from the decree entered August 12, 1914, and upon the assignment of errors filed by said plaintiffs, and upon motion of Stapleton & Sleight, of counsel for plaintiffs

IT IS ORDERED that the appeal of said plaintiffs to the United States Circuit Court of Appeals for the Ninth Circuit from said decree be and the same is hereby allowed, and a transcript of the record

be forthwith transmitted to the United States Circuit Court of Appeals for the Ninth Circuit, and that the amount of the bond upon appeal to be given by plaintiffs is hereby fixed at the sum of five hundred dollars.

Dated Oct. 27th, 1914.

R. S. BEAN,
Judge:

Filed October 27, 1914. G. H. Marsh, Clerk.

And afterwards, to wit, on the 27th day of October, 1914, there was duly filed in said Court and cause, a Bond on Appeal, in words and figures as follows, to wit:

Bond on Appeal.

Know All Men By These Presents that we, Clayton T. Eaide and Joseph A. McConnell as principals and Geo. F. McClintock as surety are held and firmly bound to the Twohy Brothers Company a corporation, the Northwestern Equipment Company, a corporation and Elbert G. Chandler, defendants, in the full and just sum of five hundred dollars to be paid to the defendants aforesaid, for which payment well and truly to be made we bind ourselves, our successors, heirs, executors, administrators jointly and severally, firmly by these presents.

Sealed with our seals and dated this 26 day of Oct., 1914.

Whereas the District Court of the United States for the District of Oregon in the cause above entitled did make and enter a decree on August 12, 1914, in favor of the defendants and against the plaintiffs adjudging that the plaintiffs were not entitled to the relief prayed for in the complaint, and that the defendants have not infringed the McConnell patent under which the plaintiffs claim, and that the defendants were entitled to recover costs from the plaintiffs, and these defendants having obtained from said court an order allowing an appeal to the United States Circuit Court of Appeals for the Ninth Circuit to reverse the decree of the aforesaid suit, and a citation directed to the said defendants is about to be issued citing them to appear in the said Circuit Court of Appeals to be held at San Francisco, California, and an order having been made and entered that these defendants should give a bond upon said appeal in the sum of five hundred dollars with surety to be approved by the Judge of this court,

NOW THEREFORE the condition is such that if the said plaintiffs, Clayton T. Eaïd and Joseph A. McConnell shall prosecute their said appeal to effect and shall pay all damages and costs that may be awarded against them if they fail to make their plea good, then this obligation to be void; otherwise to remain in full force and virtue.

CLAYTON T. EAID
JOSEPH A. McCONNELL
GEO. F. McCLINTOCK

State of Oregon,
Multnomah County,—ss.

I, Geo. F. McClintock, being duly sworn say that I am a resident and free holder within the State of Oregon, and am not a counsellor or attorney at law, sheriff, clerk or other officer of any court, and am worth the sum of one thousand dollard over and above all debts and liabilities, and exclusive of property exempt from execution.

GEO. F. McCLINTOCK

Subscribed and sworn to before me this 26 day of Oct., 1914.

[Notarial Seal]

R. SLEIGHT
Notary Public for Oregon.

The sufficiency of the foregoing bond and surety is hereby approved this 27th day of Oct., 1914.

R. S. BEAN,
Judge.

Filed October 27, 1914. G. H. Marsh, Clerk.

(Testimony of Joseph A. McConnell.)

And afterwards, to wit, on the 5th day of January, 1915, there was duly filed in said Court, and cause, an Abstract of the Evidence, in words and figures as follows, to wit:

Evidence.

Appearances:

Stapleton & Sleight, and Jos. L. Atkins, for plaintiffs. Wm. R. Litzenberg, for defendants.

Plaintiffs' counsel offered in evidence a certified copy of the patent to J. A. McConnell no. 901815 granted Oct. 20, 1908, for improvement in chock attachment for cars. Same was marked plaintiffs' exhibit A and received in evidence.

It was then stipulated between counsel that copies of exhibits might be substituted for all authenticated originals not waiving the requirment of proof of originals.

JOS. A. McCONNELL, one of plaintiffs, called as a witness for plaintiffs testified as follows:

DIRECT EXAMINATION.

I am the patentee named in plaintiffs' exhibit A. The paper you now show me is an assignment of that patent and is signed by me; it assigns a partial interest to Clayton T. Eaid and was recorded in the patent office in Liber Z 93 page 79 on Nov. 17, 1912.

(Testimony of Clayton T. Eaid.)

Copy of such assignment offered in evidence in pursuance of the above stipulation and same marked plaintiffs' exhibit B and received in evidence.

CROSS EXAMINATION.

I first met Mr. Eaid about a year ago I think—I don't remember exactly. The assignment was executed afterwards—probably in the course of a month or such a matter. I never had any other dealings with him, other than the negotiating of this assignment.

Excused.

CLAYTON T. EAD, one of plaintiffs, called as a witness for plaintiffs, testified as follows:

DIRECT EXAMINATION.

My name is C. T. Eaid; I live at 1087 Merges Drive in Portland; I am about 36 years of age. I handle timber land and real estate and at present am engaged in the car-bunk business. I have been engaged in the car bunk business for about five years. During that time I have invented six different contrivances, of different natures, for the purpose of holding the logs on the car. I have tried to complete the art, in fact, so as to get something to successfully operate in that direction, to have something that would be useful for the loggers.

By a car bunk I mean a device that goes onto the platform of the car, which the logs are loaded onto,

(Testimony of Clayton T. Eaid.)

to hold the logs sufficiently to be carried from the woods operation to the landing at the mills where they are unloaded, to save accidents, and so that they can be manipulated from the other side of the car, to keep people from getting killed when the logs are rolled off when they are unloaded. It has been my business to develop devices for that purpose.

I am one of the complainants in this suit. I have had business dealings with the defendants prior to the commencement of this suit. I met the Twohy Bros. Company about two years ago, I think in May, made a preliminary contract with them for the manufacturing of a logging bunk which I had invented.

The COURT: Do you call that a bunk?

A. Yes, bunk, a logging bunk. It is a bolster by right, but we call it a bunk. It is commonly called a bunk. And these people made preliminary contracts with me for the manufacturing of my patented device. Later they signed up a permanent contract for the manufacturing, after the bunk had been thoroughly tried out and become a useful article, that they would manufacture those bunks and pay me a royalty of so much per car per pair—that would be two bunks, which they had agreed to manufacture, the sum amounted to \$20 I believe, in the first place, and then it was finally reduced to \$10 a car royalty. During this time, while this contract was pending with me, Mr. E. G. Chandler, the defendant in this case became general manager of the company,

(Testimony of Clayton T. Eaid.)

so I understand. At least, I was referred to him in different ways, to show him some alteration made in invention in different things, by Mr. Twohy, the president of the company, and I understood that he was general manager of the concern. A little later on I took the matter up with the company. This contract was dissolved. The reason of its dissolution was the fact that Twohy Bros. Company refused to pay me the royalties that they owed me, and there was some dispute in regards to the invention, and it was dissolved by mutual consent on the 28th day of Jan., 1913. I wouldn't be positive as to the date. But we have the cancellation of it. It was absolutely canceled. The defendants went ahead with the manufacturing of the bunks, carried advertising articles of my patented bunk in the papers. And finally I said to them, "Gentlemen this contract is canceled. I wish you would not manufacture any more bunks of this particular type." I said this to Judge Twohy. Judge Twohy referred me to Mr. Chandler, and after talking the thing over, in a kind of heated argument, Mr. Chandler told me that if I had any recourse in the matter the place to settle it was in the court; that they had no further business with me, and if I thought I had any chance for to do anything, to go in the court for it.

The model you show me represents the device in question, which is known as the McConnell bunk. This device was patented to Mr. McConnell I believe in July, 1908.

(Testimony of Clayton T. Eaid.)

By argument model was offered in evidence and marked plaintiffs' exhibit C.

The principle involved in the operation of the bunk represented by the model is simply as a matter to hold the logs. The logs go lengthwise of the car. This bunk goes crossways of the car. This bunk is put up for the purpose of holding the logs securely until they are ready to unlock it. With the old method they were compelled to go underneath here and chop out a wood stake which was very dangerous.

It would operate on a truck crosswise and would be held on a center bearing. This (referring to model) holds the log. In operating that, this is the operating bar for the purpose of tripping the block on the opposite side. In pulling this bar there it throws the block down in that position, unlocks it and throws it down, so the log can roll off on the opposite side. The principle of it is to adjust this block, to shove it in any place so that you can adjust it to take different sized loads of logs. Now when she is up there, any pressure you would put against that, it is locked, set there, it can be very easily tripped by this, which is a cam movement. That throws that up and lets the log fall down. The part we claim patent on is this block, a block operating on a trunnion here, and manner of operating the block when in upright position to hold against the thrust of the logs.

Plaintiffs' Counsel. If your Honor please, if it is not perfectly clear, I would suggest that this desk

(Testimony of Clayton T. Eaid.)

could be taken as a truck. These are placed cross-wise on that, one at each end of the log, and these hold it from falling off laterally.

COURT: And the logs are simply laid in here?

Plaintiffs' Counsel. Yes. If the car be inclined, as it is for unloading, you see the logs roll by gravity.

Witness. To give you a little light on this, there are some photographs here. You can see the end of the bunk right here. The bunk goes crosswise under the load, and it trips so that you see everything stands in the clear when it is unloaded. Perhaps in a bigger picture you can get a better idea. Here is the connected truck with bunk on. That shows connection with the truck. That is what they call a connected truck.

COURT: The other is on a flat car?

A. It is on a flat car. They are to be used on either trucks or cars. There is another. That is a different design of car. It is used for the same purpose.

COURT: I want to know what you claim for your invention, on this model.

Plaintiffs' counsel. In order that the court may understand and apply the language of the patent I will ask the witness a few questions which will make it clear. If you refer to the patent you will find that there are ten claims in the case. The tenth

(Testimony of Clayton T. Eaid.)

calls for an attachment for cars comprising a chock, stop devices for engagement with the chock when in one position, and means for lowering the chock to disengage it from said devices and for sliding the chock while in lowered position.

Witness. The part that holds the log is the chock. The stop devices would be this operating stop bar. This would be the bracket here, to keep it from moving this way in or out when it is in upright position. When it is mounted, this is stop device to keep it from moving. This is the ratchet bar, mechanically stopping. The means for lowering the chock is this cam bar here, this eccentric movement with the attachment to the foot of the chock. That locks it in an upright position, and when that breaks that breaks the engagement, that gives it a chance to drop. The cam bar is this part inside of the model, eccentric movement. The outside bar is simply an operating bar, by which it can be operated from the other side.

The paper you now show me is the patent under which Mr. Chandler is claiming his rights.

Paper marked Plaintiffs' Exhibit D and received in evidence.

COURT: I suppose the only question here then, is as to whether the Chandler patent is an infringement on the other patent?

Defendants' counsel; Absolutely; there is no other

(Testimony of Clayton T. Eaid.)

question involved. Is this construction or is that patent infringed by the Chandler construction.

COURT: You admit that you are manufacturing chocks?

Defendants' counsel; We are manufacturing chocks under the Chandler patent, yes sir.

COURT: You may narrow the inquiry then to meet that issue.

Witness: I am acquainted with the construction described in the plaintiffs' exhibit D and have seen it in practice. I am the man that made it in the first place. I have an application in the patent office pending for it now.

COURT: Still, you claim that that is an infringement of the McConnell patent.

Witness: To some extent I do yes. I mean that I made plans of that invention, blue prints and drawings of it, myself—models of it—and took it to Mr. Chandler. Twohy Bros, Company, when they held the contract with me, and offered it to them as a mutual proposition under my contract, and told them at the time that I intended to file an application for patent on it. And there are some applications in the bunks where I thought there was a chance to improve them a little. This was before I dissolved the contract with them, probably three months.

The blue prints were left in the presence of these defendants on this line of invention. I was informed

(Testimony of Clayton T. Eaid.)

by their superintendent that they had burned them up, they had destroyed them, and in asking why, their superintendent, Mr. O'Brien explained that I would have to take that up with Mr. Chandler; that he had orders to destroy the prints. And I have a witness to that in case it is necessary to prove it.

The statement was made to me that it was to avoid complications that this was done.

I first became acquainted with the McConnell patent a year or a year and a half ago. I purchased an interest in it, because I thought that there was some line of invention that I wanted to use in my devices that Mr. McConnell already had covered in his patent. I brought the McConnell patent to the attention of the defendants. I talked the McConnell patent over with Mr. Chandler I think, about October, 1913. I believe it was about a month before our contract was canceled. I stated to them then that I considered this so called Chandler bunk an infringement upon the McConnell patent.

I will explain to the court the method of operation of this so called Chandler bunk from the copy of the patent. The block here, which is called the chock no. 9 apparently in fig. 1 would indicate this piece here, which seems to be a chock of similar construction to ours, with an operating trunnion here, mounted between the beams, so that it raises and lowers identically the same as ours. The function performed by it is the lowering of this chock, and the log com-

(Testimony of Clayton T. Eaid.)

ing over the top of it, the same as is done by this. When this chock is let loose to the bottom it falls down by gravity inside of the beams. This block seems to do the same thing. The Chandler model shows a bracket in here, or ratchet bar whichever you might call it, designated here as figure 6 in figure 1. That is no. 6 in figure 1. You might say notches for the purpose of adjusting this block to put it in any position where you want it to hold the log. For instance, if you want to run the block in or out, you take one log, two logs, or a full carload. When it is set out here, that is, as far as it can be set to take the full load; when it is in, it takes a smaller load. This bar does the same thing. I mean the McConnell block does the same thing. It can be adjusted in and out, and set up in different manners on the log, and is unlocked by an operating bar that extends to the other side of the car. By loosening this foot, and taking the pressure away from the foot by some means or other, this block drops between the beams, the same as the McConnell block. Now, operating mechanism here, used for locking this block in the Chandler patent is a door. This door hinged in here, is used to hold the foot of this block on this Chandler patent, instead of an operating bar here to hold the foot of it in this way in the McConnell patent. In fact, the function performed, the mechanical part involved in here, is the same. We can put a pin into this block, into their block, and make it do the same thing. In other words, we have this

(Testimony of Clayton T. Eaid.)

eccentric or cam bar in this patent, for the same effect that this is being used in another way. We are using it crosswise in the McConnell bunk while they are using it lengthwise in the Chandler bunk. The effect in the mechanical equivalents is identical, so far as the mechanical movement is concerned.

Referring now to the McConnell patent, and to the tenth claim in the Chandler model I find a chock as called for in the 10th claim of McConnell. The number in the Chandler patent is no. 9 figure 1. The stop devices for engagement with the chock when in one position that are called for as the second element of claim 10 of the McConnell patent are indicated in the Chandler patent by no. 6 in fig. 1. The bracket member 6 of the Chandler patent operates as a stop device for the Chandler chock 9 by means of the notches shown in figure 1 in the drawings. I don't see what number indicates the notches unless it would be 6 there.

I find means for lowering the chock in the Chandler model as called for in the third element of the McConnell patent; the means as shown in the Chandler patent apparently is indicated by no. 12, in figure 1. No. 12 of the Chandler patent engages the foot of the chock, no. 9 of the Chandler patent. No. 11 fig. 2 indicates the lip which stops the foot of the block 9, holds it in upright position of the Chandler patent. No. 12 of the Chandler patent is operated by a cam bar, indicated by figure 13 of the drawing of the Chand-

(Testimony of Clayton T. Eaid.)

ler patent. In fact, the cam bar must be used there to make this invention operative.

Referring to McConnell model Exhibit C, with proper allowance of proportion, the part 12 of the Chandler patent with its operating cam bar 13 could be employed by mere interchange of the parts to sustain and operate the McConnell chock. The bunk in the Chandler patent could not be operated without the use of the cam bar which is employed in the McConnell patent. The block used in the McConnell patent could be put into the device used as the Chandler patent, and used for the same purpose that the block in there is already used for.

I find the model handed me shows that the use of the cam bar and the chock block referred to in the McConnell patent can be used, with the elimination of the piece no. 12 in the Chandler patent. In other words, if the Judge would care to see the operation of this, I would be pleased to show it to him.

Whereupon the model was introduced in evidence, received and marked plaintiffs exhibit E.

The photographs shown me is one of the bunks built by Twohy Bros. Company under the Chandler patent.

Said photograph offered and received in evidence, and marked plaintiffs' exhibit F.

In claims 1, 2, 3, 4, 5 and 6 of the McConnell pat-

(Testimony of Clayton T. Eaid.)

ent, I find the subject matter of the Chandler device described.

CROSS EXAMINATION.

At the time that contract I had with Twohy Bros. Co. was canceled I received a consideration. I believe the McConnell bunk as before the court was in a way involved in the contract which I had with Twohy Bros. and which has been canceled, to this extent: There was some things involved in the McConnell patent that were built by Twohy Bros. while my contract was in existence that were supposed to be built under my contract; for instance, this bunk right here, the Chandler bunk.

I knew that the McConnell patent was in existence and had a copy of it for some time at the time I made the contract with Twohy Bros. The construction of the McConnell device was embodied in the devices being made under my contract with Twohy Bros. I do not say as here before the court. There was an application of it, which is that model right there, of the Chandler patent. That claim was copied by the McConnell patent. That was made while my contract was in existence. That is, the application of the Chandler patent was made.

This mechanical construction as it stands here was made according to the Chandler construction. That was made in their shops before the contract was canceled.

(Testimony of Clayton T. Eaid.)

Contract dated Dec. 22, 1911, between Eaid and Twohy Bros. Co. offered and received in evidence as part of cross examination and marked defendants' exhibit 1.

Defendants' Counsel: The purpose of presenting this contract was to bring out the fact that it was entered into for the purpose of manufacturing a log bunk according to Mr. Eaid's patent. These patents, I see, are dated 1913. I don't happen to have evidently an Eaid patent which was involved or intended to be covered by the contract, unless this construction was considered and the contract entered into before the patents were issued. My first question to Mr. Eaid was whether or not either of the bunks shown in these patents were the bunks had in mind at the time this contract was made; and I would like to ask, if counsel has no objection, whether these bunks were the bunks.

COURT: You mean the bunks shown in what patent?

Defendants' Counsel: Two of the Eaid patents. Patent 1,050,929, of Jan. 21, 1913, and the Eaid patent 1,055,150 of March 4, 1913.

Witness: Why I should say that these two particular types of bunks were in mind at that time. I mean the two described in the two patents that he referred to, that he has handed me copies of. These patents were applied for from the United States Pat-

(Testimony of Clayton T. Eaid.)

ent Office. I believe that one of them was granted when that contract was made, if you will look at the date.

These were not entirely the inventions that stimulated the entering into of this contract. The point is the Twohy Bros. made a contract with me to manufacture a device known as the Eaid Logging Bunk. Under that device, and under that heading, there were various different kinds of Eaid logging bunks submitted to these people for manufacture. Some were rejected and some were taken up and manufactured.

COURT: Was the Eaid logging bunk a subject of patent? A. Yes sir.

COURT: Had a patent been issued on that?

A. I believe—what is the date of that contract?

COURT: 22nd of December, 1911.

A. Well this patent is Jan. 21, 1913. It says "application filed Dec. 29, 1910"

Copies of Eaid patents introduced and received in evidence and marked defendants' exhibits 2 and 3.

The document you hand me is the cancellation of the contract entered into Dec. 22, 1911, and March also, a further contract. That covers the preliminary contract and the permanent contract which I spoke about before, that was added on the 28th of March, 1912. This is a mutual agreement between

(Testimony of Clayton T. Eaid.)

Twohy Bros. and me for cancellation of that agreement which they held with me for manufacturing bunks. As far as the contract was concerned, that brought our dealings to a close.

Cancellation of the Eaid-Twohy Bros. Co. contract introduced and received in evidence, and marked Defendants' exhibit 4.

I did not purchase the interest in the McConnell patent for the sole purpose of bringing this suit against Twohy Bros. One reason I did not purchase it sooner was that I hadn't sufficient funds to operate, on account of Twohy Bros. holding me up on some of my profits that belonged to me. And another reason was that there was some little things into that, that I thought would be beneficial to me, and I figured to pick them up as I got to it, because I had an invention along that line, and I figured that I might want to use some of the claims in that patent.

I have never made a full sized working bunk involving the construction as embodied in plaintiffs' exhibit C.

Q. I am asking the witness to designate the elements which operate or actuate this chock.

COURT: You may answer that question.

A. Do you want me to describe that by the numbers?

Q. I am asking you to designate.

A. I would like to hear that question again.

(Question read.)

(Testimony of Clayton T. Eaid.)

COURT: Parallel actuating what?

Mr. LITZENBERG: Paralel actuating shafts 4 and 5 the bottom of page 1 of the McConnell patent. The point is I want to bring out that they have provided specific means for positively actuating their chock in order to move it into and out of engagement with their stop devices, which stop devices constitute their ratchet or notches and the cam portion 19 on the McConnell patent. And I want simply to identify the means for, as the claim says, lowering the chock. That is a positive movement.

A. These means for lowering the chock would be this cam movement here and the actuating bars.

Q. The actuating bar?

A. And the cam movement.

Q. Well that is a crank pin?

A. That is a cam movement, or crank shaft, as you might call it. Mechanically they use both.

I understand the word "actuating" to mean holding in position to keep it from moving. It is anything that causes it to move or to hold it to keep it from moving, or to cause it to move when it was released. That is the way I would term it, from a mechanical standpoint. The purpose of lowering the chock is to let the log off the car; so that the log can roll over the top of it to get off. Otherwise, it couldn't. If you didn't lower the chock, your chock would be locked, and you couldn't lower the log.

As I would understand the language "to disen-

(Testimony of Clayton T. Eaid.)

gage it from said device'' claim 10, that would mean for lowering it, putting it down out of the way so the log would roll over it. That would be my construction if it.

I do not profess to be a mechanical engineer. I have had very little technical mechanical training. In fact, about my mechanical experience, it has been actual personal experience.

REDIRECT EXAMINATION.

There were two contracts which I had with certain of the defendants. One was a contract, which was a preliminary contract, that was signed up in 1911, for the purpose of giving the defendants a chance to find out whether the bunks that were being built at that time were operative or not, and whether they would be a success. And then later on there was another contract, that was simply a continuance of the first one. They decided the proposition was all right, and then they signed up a permanent contract for premanent manufacture. The object in making these contracts was to try and get something out of my patents, to get somebody to take hold of the manufacturing of them and manufacture it in a big way, so that I could receive some royalties as profits from my invention.

I received such assistance from the defendants in a very small way. In fact, the profits that I got from it so far wouldn't more than overcome the time and money that I have expended.

(Testimony of Clayton T. Eaid.)

I know the instrument you show me. It is the contract between myself and the defendants, Twohy Bros. Co. That is the second contract that I have referred to.

The supplemental contract introduced and received in evidence, and marked plaintiffs' exhibit G.

I was engaged in promoting the manufacture of a line of bunks to be called the Eaid bunk, and I entered into these contracts with Twohy Bros. Co. to assist me in producing these bunks commercially. The principal reason for terminating the contracts was that the contract was not carried out. The contract was breached by them. They didn't manufacture the stuff as they agreed to do, or didn't turn it out in a workmanlike manner. On the other hand, they didn't manufacture the stuff in good faith as they agreed to do, and there was several points where they breached their contract with me. Another thing was, I was denied the right to go in to see their records to know how many bunks they had built at any time, which I was entitled to under the contract. It was provided in the contract that the articles put onto the market should be marked "patent applied for". That was never done. Upon the cancellation of the contracts, there was a check for \$250.00 paid to me for royalties on the bunks that had already been built under my contract, which was accrued payments due under the contract. I

(Testimony of Clayton T. Eaid.)

demanded payment before entering into the cancellation of the contract.

There was a little question there when that assignment was made in regard to what I was entitled to in royalties. That is the cancellation of the contract. Mr. Chandler, the defendant, tried to build entirely another type of bunk, which I considered came under my patent, and tried to deny me the right of collecting royalties under my contract with the Twohy Bros. Co.

Q. When you refer to the bunk that was being contrived or built by Mr. Chandler, do you refer to that one that is represented by this model here?

A. That bunk was under construction at that time, along with another type that has not been introduced here.

The date of cancellation of the contract is March 27, 1913. (Defendant's exhibit 4.)

My principal reason for purchasing an interest in the McConnell patent was because I was going along the lines of invention in making some improvements, what I considered that might be improvements to the bunk we were already building, that I thought there were some principals involved in the McConnell patent at that time—this block here operated on a trunnion with a pivot—which I might possibly want to use, and I didn't believe I could get around. In other words, I thought it would be necessary to

(Testimony of Clinton F. Blake.)

have that for the completion of some other inventions that I intended to make and did make on this type of bunk.

Excused.

CLINTON F. BLAKE, called as a witness on behalf of plaintiffs, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

I am a mechanical engineer. I served as chief draughtman for the Industrial Works at Bay City, Michigan, manufacturers of cranes and railroad equipment. I served as designing engineer for the Shaw Electric Crane Company, Muskegon, Michigan. I served as chief engineer of the Calumet Engineering works, of Harvey, Illinois. And I am now in practice here at Portland. I have designed heavy work here. The last work was the machinery on the public docks. Also considerable work for the Portland Railway Light and Power Company at Bull Run and other large work.

I have examined the plaintiffs' exhibits A and D, being respectively the McConnell and Chandler patents and am acquainted with their contents. I have seen the Twohy bunk, which agrees in every essential particular with the same as exhibited and exposed in the Chandler patent, in actual operation in the woods. The Twohy bunk is the same as that model defendants exhibit here.

(Testimony of Clinton F. Blake.)

Referring to claim 10 of the McConnell patent the elements are a chock and stop device, and means for lowering the chock device. I find these elements in the Chandler patent. In claim 10 of the McConnell patent we have a chock, which is shown as 9 on the Chandler patent. In figure 1 and figure 2, figure 3 and figure 4; all figures. In the McConnell patent we have stop devices which in the Chandler patent are shown as no. 6 in all the views. In the McConnell patent we have means for lowering the chock, which in the Chandler patent would be no. 13, the shaft with its crank portion 15 and the dog 12. It is my professional opinion as a mechanical expert that the means for lowering the chock to disengage it from the stop devices shown in the Chandler patent are the substantial mechanical equivalents of the means shown in the McConnell patent. I would regard the means shown in the Chandler patent as interchangeable with the means shown in the McConnell patent, allowance being made for proportion. They perform the same functions and arrive at the same result. By that I mean that the operating devices shown in this Chandler patent could be incorporated in the McConnell patent to operate the chock and stop devices as shown in the McConnell patent.

Plaintiffs' exhibit F shown me is a model of what is know as a lumber block. The chock, the stop device, and means for lowering the chock, defined

(Testimony of Clinton F. Blake.)

in claim 10 of the McConnell patent are found in the model. I would consider the subject matter of plaintiffs' exhibit E and the subject matter disclosed in the Chandler patents mechanical equivalents. I find only part of the elements of the Chandler device in Exhibit E; the essential elements are here. I find the dog 12 omitted. Its function of the Chandler patent is to lock the chock 9 in an operative position. The bend or crank portion of the shaft in Exhibit E would correspond to it. The bend or crank portion 15 of the shaft 13 of the Chandler would perform the same function without the dog 12 of the Chandler as with it, if it were located according to the requirements of that function. The dog 12 performs no other purpose than locking. The incline of lip 11 in figure 3 of the Chandler patent, is made such that when the dog is released by operating of the shaft 13 the dog will by gravity leave lip 11. The dog is essential as far as the drawings show here, in the present location of the shaft, but it could be made very easily to operate without the dog. And such change would be by the introduction of mechanical equivalents for that which is shown in the McConnell patent or in the Chandler patent. Referring to the McConnell patent, claim one we find "parallel beams, means for securing the beams to a car platform, oppositely disposed chocks, fixed means for engaging the chocks, and means for actuating the chocks." I find all of these elements in combination in the Chandler patent, but the means

(Testimony of Clinton F. Blake.)

for securing the beams to a car platform. I don't find that in the Chandler patent.

The element parallel beams in the Chandler patent is found substantially to be shown as nos. 1 and 2, the vertical side plates.

Q. Do you find "means for securing the beams to a car platform" in the Chandler patent?

A. I don't find any means shown, but I suppose they would be intended, as it must be secured.

From my knowledge of the art, that bunk could not be used upon a truck without securing it to the truck. So the means for securing it to the truck are necessarily implied in the bunk. I will indicate by reference to the Chandler drawing the "oppositely disposed chocks pivotally and movably mounted between the beams." No. 9 of the Chandler patent. Those chocks answer the description of the third element of the McConnell claim one.

In the Chandler patent "fixed means for engaging the chocks when elevated" are represented by the side plates 6 with their notches or corrugations. "Means carried by the beams for actuating the chocks" is indicated by shaft 13 with its crank portion 15 and dog 12, Chandler patent.

The combination described in claim one of the McConnell patent described elements found in combination in the Chandler patent. The combination

(Testimony of Clinton F. Blake.)

of the two patents arrive at the same result and by substantially the same means.

Referring to claim 2 of the McConnell patent I find the elements as follows: Beams, stop and guide devices, chocks, means carried by the chocks for engaging the devices, and means for actuating the chocks. Referring to the Chandler patent nos. 1 and 2 of the Chandler patent indicate the beams called for in the McConnell patent. "Combined stop and guide devices fixedly carried thereby" would be composed of member 6 with member 3. That is the top plate. It is omitted from the exhibit model. The chocks called for in claim 2 of the McConnell patent are indicated by no. 9 of the Chandler patent. Chocks 9 of the Chandler patent are pivotably and slidably mounted within the stop and guide devices shown therein. "Means carried by the chocks for engaging the devices", to wit, the stop and guide devices are trunnions on the Chandler patent. The means for actuating the chocks is indicated on the Chandler patent with shaft 13 with its crank portion 15 and dog 12.

Q. How do the elements named in your last answer cooperate with chocks 9 to effect operation?

A. When the chock 9 is thrown into upright position, the shaft 13 by reason of its crank portion 15 when it is thrown over, throws the dog 12 into engagement with the extending lip 11 upon the lower portion of the chock.

(Testimony of Clinton F. Blake.)

In figure 4 of the McConnell patent, the pin no. 24 is the equivalent of lip 11 of the Chandler patent.

As to claims 3, 4, 5 and 6 of the McConnell patent, I find substantial equivalents of the several combinations therein defined in the subject matter of the Chandler patent.

CROSS EXAMINATION.

I have had no actual experience in building car bunks. My knowledge of this case has been largely acquired by the study of these patents since I was engaged to give testimony.

Referring to the drawings of the McConnell patent, the stop device is no. 15 as shown in detail in fig. 3; also shown in fig. 2. The notches shown in figure 3 constitute the stop; I don't find the reference figure for them. The trunnion is engaged by the notches; it seems to be designated by several numbers, nos. 19 and 18, two different portions of the same trunnion.

Q. Is it not true that 18 constitutes the trunnion which slides in the slideway 16. Looking at figures 3 and 4 of the McConnell patent it is very clear. Is it not true that the trunnion proper designated 18, slides in the slideway 16 of figure 3?

A. That portion 18 of the trunnion slides in the slideway 16, fig. 3.

Q. Is it not also true that the cam portion designated 19, shown clearly in figure 4 is so positioned as to

(Testimony of Clinton F. Blake.)

move over these notches when the chock is in one position, and when in another position the cam portion 19 moves down into and engaged the notches 15?

A. No. sir. The cam portion 19 seems never to enter the slots. Seems never to enter the notches. The cam portion 19 is this upper portion here. That is on top of the trunnions here and right on the top of these notches.

Defendants' Counsel: Let me read just a few lines from the specification: "Secured to the adjoining faces of the beams 3 of each bar are combined guiding and stop devices such as shown in fig. 3 and each of which consists of a face plate 14 having an integral longitudinally extending ratchet bar 15. A longitudinally channeled guid 16 is formed integral with plate 14 and located above but beyond the side of the ratchet bar. Four of these guide and stop devices are used in connection with each pair of beams 3, said devices being arranged in parts as indicated in fig. 1 and adjacent the ends of the beams. Interposed between the stop devices of each pair is a chock consisting of a bowed or curved arm 17 having trunnions 18 designed to travel within the guides 16. Those portions of the trunnions outside of the guides and above the ratchet bars 15 are provided with cam faces 19 terminating in shoulders 20 designed, when the arm 17 is swung upward, to turn downward into engagement with the adjoining teeth of the ratchet bars." Those ratchet bars constitute the fixed means,

(Testimony of Clinton F. Blake.)

and when we read in claim 10 "stop devices for engagement with the chock when in one position" that means that when the chock is in its raised or operative position, that cam portion 19 engages these stop devices?

Plaintiffs' Counsel: Objected to. Counsel is reading into the claim something which does not appear in the claim. He first reads from the specification, then from the claim, and his reading into the claim that which is not found in the claim will tend to confuse the mind of the witness. The specification can be used to construe a claim which is ambiguous, but the question should be directed clearly to the witness to determine what he finds in the claim, and not to read at one time the specification, and then by inference to carry that specification into the claim.

Defendants' Counsel: I am not reading into the claim anything that is not there. I am simply referring to the specification, as is amply sustained in the decisions, to ascertain the meaning of the language used in the claim.

Plaintiffs' Counsel: If your Honor please, in the words, that is in the upright position, he is construing into that claim what is open to the construction of the court, and he is confusing the mind of the witness by a suggestion of a construction which is not in the claim and which the court has not pronounced upon. In other words there are words in that question which, if they appear to the mind of

(Testimony of Clinton F. Blake.)

the witness or not, will appear in the record as suggesting something in the claim that is not there, and I can point them out.

COURT: Well, you can clear that up after he answers this question, if it seems ambiguous.

Plaintiffs' Counsel: The objection of course is reserved to the question.

COURT: Yes, I understand.

A. According to this drawing of the McConnell patent, as I read it, the numeral here 19, with its reference in fig. 4 does not go to the part of that trunnion which projects to those notches. That was the reason I answered the previous question as I did.

In claim 10 we find for the purpose of "lowering the chock to disengage it from said devices." Said devices, are the notches on member 15. It need not necessarily be disengaged before it can be slid along. The claim says "means for lowering the chock to disengage it from said devices and for sliding the chock while in lowered position." That is the latter part of claim 10; it must be lowered in this position to be operated. It cannot be slid when it is in the raised position, because the trunnions bearing upon the guide there forces this dog portion down into the notches in piece no. 14. By dog portions, I mean cam 19.

Referring to the Chandler patent part no. 6 is in engagement with the chock in every position of the

(Testimony of Clinton F. Blake.)

chock. When the chock in the Chandler patent is lowered, while it is true that the trunnions 10 would still rest on the corrugations, it would be disengaged to the extent that it would then be moved, it would not be locked into engagement with piece 6 any further.

It is still engaged with the piece 6 but not in an operative sense, in the same manner that it was before.

It is true that there are two trunnions which rest in these seats, and they are in engagement no matter into what position the chock is moved. The chock in the Chandler patent can be slid back and forth by lifting the trunnions out of the notches and moving it back and forth, referring to the claim 10. It doesn't slide on guides, but it is the equivalent of sliding.

Q. In the McConnell patent you have slideways outside of the stop devices in which the trunnions proper slide. Does the chock of the Chandler patent slide as does the chock of the McConnell patent?

A. I should say that it depends upon the construction of that word "slide" and just what you mean. Of, course, it doesn't slide on guides the same as the McConnell patent does.

The means for lowering the chock in the McConnell patent is this arm 25 and the link 22. Through the shaft 5 and the link 25, and the arm or link 22 the chock of the McConnell patent is positively moved or positively actuated, the purpose being to draw

(Testimony of Clinton F. Blake.)

these cams out of engagement with the fixed stop devices. In a full sized working machine it would be necessary to have such a device as this for positively moving the chock to disengage it from the stop devices.

In the Chandler device I find no means for positively moving the chock. I find there a latch mechanism for releasing the chock and the chock then is free to be moved when it is released.

Certified copy of the file wrapper of the McConnell patent, showing the application as originally filed, with claims as amended during the prosecution of the application, introduced and received in evidence and marked defendants' exhibit 5.

REDIRECT EXAMINATION.

I have stated that by means of the members 22 and 25 in the McConnell patent, the chock shown in that patent is adapted to be positively actuated. The chock could not be operated without such members 22 and 25.

The chock of the McConnell patent may be actuated by direct manipulation, just as the chock 9 of the Chandler patent may be operated, certainly. That is adjusted back and forth and thrown up.

You cannot release that from this end; it cannot be reached; but it can be operated, adjusted and

(Testimony of Clinton F. Blake.)

thrown into position from this end without handling the rest of the mechanism.

You may therefore, use the members 22 and 25 for setting the McConnell chock, or you may set the McConnell chock just as the Chandler chock, is set, by direct manipulation. When set by direct manipulation parts 25 and 22 perform the function of locking the chock into operative position. This is substantially the same as the means for locking the chock shown in the Chandler patent.

I do not wish to be understood as stating that the McConnell chock is operated by any different means—is necessarily operated by any means different from those employed in the Chandler. The two chocks are operated by exactly the same means.

There has been a question raised here as to whether the McConnell chock slides from one position to another, and whether the Chandler patent does likewise; substantially I should hold that they both slide. The fact that the McConnell patent has to be lifted over—it can easily be slid over, like that. The Chandler patent,—they both move endwise. As a matter of fact the McConnell chock slides in a straight line and the Chandler patent slides in an undulatory line. Both slide. The sliding of the two is directed toward the accomplishment of the same result, or substantially the same result, the same end, which is to adjust the chock to positions suitable for the different sized of loads, logs on a car;

(Testimony of E. G. Chandler.)

that is, the number of logs on the car. If we had only two logs on this car, two large logs, we would probably have to have this chock slide in here. If we had three large logs, we would probably have to have it out.

RECROSS EXAMINATION.

In connection with claim 10, of the McConnell patent we read "Means for lowering the chock to disengage it from said devices and for sliding the chock while in lowered position." That means any device or method of sliding the chock when it is disengaged from its holding. As shown on the drawing it would be link 22 and arm 25. I do not find such parts as that on the Chandler patent for moving the chock.

PLAINTIFFS REST.

E. G. CHANDLER, callsed as a witness on behalf of defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

My name is E. G. Chandler; age 36; I am president of the Northwestern Equipment Company and have management of the shops of Twohy Bros. I am also a mechanical engineer.

I am patentee mentioned in the original patent handed me no. 1066795 dated July 8, 1913, granted

(Testimony of E. G. Chandler.)

to E. G. Chandler. The chock or the log bunk here described and claimed is my invention. As to the developments leading up to the invention of this log bunk will state there are a number of bunks on the market which perform the operation of carrying logs in trucks and flat cars, to a more or less extent, but most of them have some defect in their construction, and for one reason or another most of them have been rejected by certain users of log bunks; and in the construction of trucks which we are building at the Twohy Bros. plant, it became necessary to have a bunk which would meet all of the requirements of the logger, both as to adjustability and safety and *each* of operation; and after a great deal of study and time spent on the subject, I finally conceived the idea of the bunk as set forth in the patent which has been issued to me, and we have proceeded with the construction of them.

I was not with Twohy Bros. Company at the time the contract Defendants Exhibit 1, between C. T. Eaid and Twohy Bros, was entered into. I became acquainted with Twohy Bros. Company during the life of that contract.

Q. I hand you two patents granted to C. T. Eaid, defendants' exhibit 2 and 3 and will ask you if either of the bunks shown and described in those patents was the bunk that the Twohy Bros. were manufacturing at the time you became connected with them?

A. Twohy Bros. were manufacturing a modification of the bunk shown on patent no. 10555150.

(Testimony of E. G. Chandler.)

They were manufacturing it at that time. They were selling that bunk under this contract. It was not giving satisfaction as a merchantable device. In the first place, the bunk was too weak, and its mechanical construction was such that after very short service it failed absolutely to work.

Mr. Eaid never presented to me, or to my knowledge presented to any one connected with the company, any drawings or suggestions of this Chandler bunk.

Model offered and received in evidence and marked Defendants' exhibit 6.

It was almost impossible to make sales of the Eaid bunk, because after the bunks were out on the work they failed to perform the service for which they were put out, and while we sent out a number of bunks on trial, there were only four of them that were ever paid for.

Mr. Eaid never showed me or made any suggestions to me of the mechanical construction embodied in the device on which you secured your letters patent referred to. It is my own original invention, worked out after these difficulties arose in connection with the other bunk which we were manufacturing. The purpose of my bunk was to provide a chock which could be released and entirely adjusted to any relative position, or which could be removed.

Excused.

(Testimony of T. O'Brien and J. C. Streng.)

T. O'BRIEN, called on behalf of defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

I am superintendent of Twohy Bros. shop; have been with this company for three years and a half. I was connected with the company at the time Mr. Eaid entered into his contract with them for making his bunk. That bunk was built by Twohy Bros. It was practically the same bunk as is shown in the Eaid patent no. 1055150. Mr. Eaid never at any time presented to me any blue prints or any drawings, or any sketches, showing the construction embodied in the Chandler bunk. This Chandler bunk was first brought out about fifteen months ago. After it was brought out, the company discontinued making the bunk which it had been making under the Eaid plan.

Excused.

J. C. STRENG, called as a witness on behalf of the defendants, being first duly sworn, testified as follows:

DIRECT EXAMINATION.

I am J. C. Strong; I am a mechanical engineer 52 years old. I have been in mechanical work for 30 years; for about 8 years with the Industrial Works, at Bay City, Michigan, manufacturing all kinds of railway appliances, cranes, derricks and such matters,

(Testimony of J. C. Streng.)

and successively with that firm as draughtsman, chief draughtsman, and erecting engineer. Then successively with the Bucyrus Company as draughtsman, chief draughtsman, and assistant engineer. And then as designing engineer with firms in Chicago, Hoover and Mason, consulting and designing engineers. And then with the Brown Hoisting Machinery Company of Cleveland, Ohio. Then with the Wellman Seaver Morgan Company, Cleveland, Ohio, as designing engineer. Since then I have been in Portland in business for myself.

Referring to the McConnell patent, claim 10, the first stop device that comes into notice there is the cam or pawl, which is integral with the chock, which engages the ratchet teeth. I also find that back in the operating connection the arm 25, I think it is, which connects the operating shaft with that connecting bar 22, that arm comes down and locks there. That maintains it; that together with the stop 19. The "Stop devices for engagement with the chock when in one position" refers to the pawl or cam; that is on the chock, inherent in the chock. In figure 3 of the drawings of the McConnell patent, the stop devices are the ratchet teeth which are shown there; also the slide that has been referred to as no. 16.

Q. Referring to figure 4, which shows the chock, what portions of the chock are adapted to the element shown in figure 3?

(Testimony of J. C. Streng.)

A. The trunnions 18 slide in the guide 16 and the pawl or dog 19 engages with the ratchet teeth shown in figure 3. That is, not in all positions. When the operating means are used to throw the chock into its upward or holding position, as it performs this motion, the dog 19 which is integral with the chock, revolves down into a ratchet space, and catches against the tooth which is next. That is for holding the chock in its position against a lateral movement. In order to adjust the chock, or slide the chock, it is necessary to operate the actuating bar 22 and pull it back, I should say.

Referring to plaintiffs' exhibit C, it differs in its construction and operation from the Chandler chock as follows: The McConnell patent has the brackets fastened to the beams, with the ratchet teeth, and the sliding groove for sliding of the trunnions. In contrast to that, this has not that, it has no ratchet teeth; it has no sliding groove whatever. And this has those ratchet teeth there in order to hold that dog from sliding that way. This has not. This has the corrugated seats for holding the trunnion. These trunnions are pivotal in those seats. In this case the trunnion rolls in the sliding surface, and thereby disengages that dog, which is integral with the chock, and raises it out of its position when this is released. I don't find that at all on this model. Another thing in the operation, in the McConnell patent, in order to put this chock into position this

(Testimony of J. C. Streng.)

lever must be moved forward like that, locking this in this position and holding it there against this shoulder, against the ratchet teeth. In this case the chock is held, in the Chandler patent, in position by a dog, which I believe is no. 12 in the patent; that dog rests against the lip no. 11 in the Chandler patent, prevent the chock from moving, or rather I should say from revolving. I also notice, one other thing, that has not been mentioned here; that in the Chandler patent, when the chock is in this upright position, it may be moved back without disengaging the operating handle, to any adjustable position, so that you may, without interfering with the operating mechanism, adjust it to suit any width on the bunk. I also notice in the operating of this chock, when it is desired to release it, that all that is necessary is to release this lever, and the chock falls of itself. That is a part that is an inherent part of the chock as designed by the patentee. This upper end here being heavy, so that gravity makes it drop.

There is no way of releasing the chock of the McConnell patent without moving the operating lever. By moving that lever you rotate the chock and any further rotation of that draws the chock back and slides it in the slide designed for it.

Q. As a mechanical engineer, in your judgment, is this a practical car bunk, operative car bunk?

A. Well, that is a question that is not dependent

(Testimony of J. C. Streng.)

on this model. It might be done so. I heard the testimony and I think it might be possible. I don't know what the difficulties have been with this model or in its construction, and I have not seen them, so I could make no comparison of this and that as far as the mechanical device is concerned.

The language found in claim 10 of the McConnell patent, which reads "means for lowering the chock to disengage it," has reference to the mechanical means for positively moving the chock. That positive movement of the chock, as referred to in the claim is necessary in order to disengage it from the stop devices. In a full sized working model of the McConnell construction, in my judgment there would be friction between the stop device, the notch and the cam face bearing against it, caused by the log bearing against the chock which would make it necessary, in order to release the chock, to positively pull or actuate the chock. It would be necessary to positively pull the thing, in order to overcome that friction contact caused by the weight of the log against the two flat surfaces.

COURT: That is holding there with the log? You have to pull it to release it.

A. That becomes a fulcrum of the first order.

CROSS EXAMINATION.

I have never made any practical experiments with either one of these models. This is the first model

(Testimony of J. C. Streng.)

of the McConnell device I have seen, but I have seen the drawings and studied them and some others at the same time. This as well.

Q. The same operation ensues in respect to the Chandler bunk as there would in the McConnell, with reference to your last answer?

A. No, no. It is entirely different.

COURT: If there is a pressure on there, how would you release it?

A. That is released by releasing the latch. They have to operate the handles to release the chock in either case. That is, in the McConnell patent, the operation of the handle operates the chock; and in the Chandler patent the operation of the handle operates the latch; then the dog falls away by gravity and the pressure, and then the chock rolls over, on account of its weight, its unbalanced weight with the load against it from the logs. The remote operation in each case is not the same. The operation of the handle does not directly depress the chock in each case. The operation of a handle permits the depression of the chock in each instance. It doesn't actuate it. There is a difference between permitting and actuating. In this case gravity has a great deal to do with it, and also the angle at which the dog strikes the lip on the chock.

I have no connection with the defendants.

(Testimony of J. C. Streng.)

Patent to Cicero D. Matheny no. 513,124 Jan. 23, 1894 offered and received in evidence and marked defendants' exhibit 7.

Patent no. 790,915 of May 30, 1905, to Thomas D. Parsons offered and received in evidence and marked defendants' exhibit 8.

Patent no. 770,899 of Sept. 27, 1904, to Mason Foshee, introduced and received in evidence and marked defendants' exhibit 9.

Defendants' counsel then offered in evidence for the purpose of showing something of the prior state of the art the patent to Manly Wilbur marked defendants' exhibit 10 and patent to Robert J. Thompson marked defendants' exhibit 11, and patent to Geo. W. Warner marked defendants exhibit 12, to which offer plaintiffs' counsel objected upon the ground that none of said patents were certified or authenticated, which objection was sustained, to which ruling the defendants excepted.

It is hereby stipulated that the foregoing condensation of the testimony and evidence is a true, complete and properly prepared statement and condensation of said evidence and testimony together with plaintiffs' exhibits A to G inclusive, which are hereto annexed, excepting plaintiffs' exhibits C and E which are models, and including defendants' exhibits 1 to 12 inclusive, excepting defendants' exhibit 6 which

is a model, and that the same may be certified as above by the judge of said court without further notice.

STAPLETON & SLEIGHT &
JOS. L. ATKINS

Attys. for Ptff.

WM. R. LITZENBERG

Attys. for Dfts.

I, CHAS E. WOLVERTON, the judge before whom the above entitled cause was tried, hereby certify that the foregoing statement and condensation is a true, complete and properly prepared statement and condensation of the evidence and testimony introduced and offered on the trial of the foregoing cause, including the exhibits hereto attached, marked plaintiffs' exhibits A to G inclusive except plaintiffs exhibits C and E which are models, and including defendants exhibits 1 to 12 inclusive, excepting defendants' exhibit 6 which is a model, and that the said condensation and statement of the evidence shall constitute a part of the record in this cause.

CHAS. E. WOLVERTON

Judge.

Dated Jan. 5, 1915.

Plaintiff's Exhibit "A"

PLAINTIFF'S EXHIBIT "A"

J. A. McCONNELL.
 CHOCK ATTACHMENT FOR CARS.
 APPLICATION FILED JAN. 24, 1908.

901,815.

Patented Oct. 20, 1908.

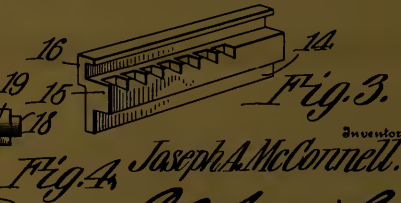
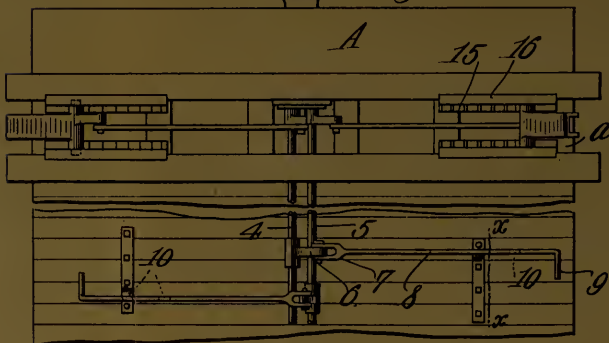
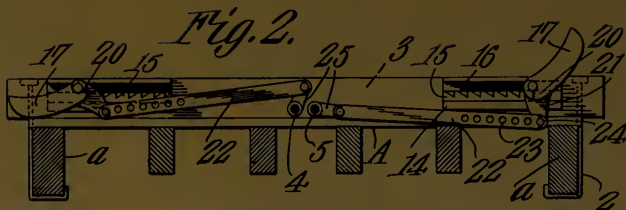


Fig. 5.
 2 Witnesses
E. J. [Signature]
Robert D. Lawson

Fig. 4.
 24 30
Joseph A. McConnell
Charles [Signature]
 Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH A. McCONNELL, OF DALLAS, OREGON.

CHOCK ATTACHMENT FOR CARS.

No. 901,815.

Specification of Letters Patent.

Patented Oct. 20, 1908.

Application filed January 24, 1908. Serial No. 412,457.

To all whom it may concern:

Be it known that I, JOSEPH A. McCONNELL, a citizen of the United States, residing at Dallas, in the county of Polk and State of Oregon, have invented a new and useful Chock Attachment for Cars, of which the following is a specification.

This invention relates to logging cars and the like and more particularly to chock attachments designed to be secured upon a car for the purpose of holding logs or timbers against displacement upon the car.

Another object is to provide an adjustable chock which, when in operative position, is securely held in place and can not be forced accidentally out of proper position.

Another object is to provide novel means whereby chocks can be moved into lowered position, said means being so disposed that there is no danger of the released logs falling upon the operator.

Another object is to provide simple means for detachably securing the attachment to a car.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a plan view of a portion of a car having the attachment thereon. Fig. 2 is a longitudinal section through the attachment, said section being taken transversely of the car platform and the chock being shown in elevation. Fig. 3 is a detail view of one of the combined guides and stops used in connection with each chock. Fig. 4 is an outside elevation of one of the chocks. Fig. 5 is a section on line *x—x*, Fig. 1.

Referring to the figures by characters of reference, A designates a car platform of any preferred construction and the side sills thereof are designed to be engaged by the hooked ends 1 of bolts 2 which extend downward through and are secured within the ends of parallel beams 3. These beams extend transversely of the platform and are arranged in pairs. Parallel actuating shafts 4 and 5 are journaled within the middle portions of all of the beams employed and extending from the middle portion of each of these shafts is an arm 6 to which is piv-

otally connected the forked end 7 of an actuating rod 8. These rods extend toward opposite sides of the platform and are provided with grips 9 at their outer ends so that they may be conveniently manipulated. Openings 10 are formed within each rod and designed to receive the offset end 11 of a holding member 12 which is bolted or otherwise fastened to the car platform. A retaining pin 13 may be extended downward through the offset end of each holding member and into the car platform as indicated in Fig. 5, said pin serving to confine the operating bar 8 and prevent it from accidentally slipping off of the end 11 engaging it. Secured to the adjoining faces of the beams 3 of each bar are combined guiding and stop devices such as shown in Fig. 3 and each of which consists of a face plate 14 having an integral longitudinally extending ratchet bar 15. A longitudinally channeled guide 16 is formed integral with plate 14 and located above but beyond the side of the ratchet bar. Four of these guide and stop devices are used in connection with each pair of beams 3, said devices being arranged in pairs as indicated in Fig. 1 and adjacent the ends of the beams. Interposed between the stop devices of each pair is a chock consisting of a bowed or curved arm 17 having trunnions 18 designed to travel within the guides 16. Those portions of the trunnions outside of the guides and above the ratchet bars 15 are provided with cam faces 19 terminating in shoulders 20 designed, when the arm 17 is swung upward, to turn downward into engagement with the adjoining teeth of the ratchet bars. An arm 21 extends downward from each of the chocks and pivotally connected to it is a link 22 having a series of apertures 23 any one of which is designed to receive a wrist pin 24 extending from arm 21. The link 22 of one of the chocks is connected to a crank arm 5 extending from the adjoining shaft 5 while the chock at the other side of the car is similarly connected to the crank arm 25 extending from the other shaft 4.

As heretofore stated any desired number of chocks may be secured upon the platform and the pairs of beams 3 can be adjusted toward or from each other so as to hold either long or short logs. This adjustment is permissible in view of the facts that the shafts 4 and 5 extend through all of the

beams and said beams can be slid thereon. After the various beams have been properly positioned and then secured by tightening the bolts 2 the chocks can be adjusted so as

to engage the links 22 at any desired points. After this adjustment is effected the operator releases the bars 8 and pushes them inwardly. This will cause shafts 4 and 5 to be partly rotated and motion will be transmitted through arms 25 to links 22. Arms 21 will therefore be swung outwardly and move the shoulders 20 downward into engagement with the adjoining ratchet teeth. This operation will bring the shaft 5, wrist pin 24, and the pivotal connection between link 22 and arm 25 practically in alignment so that each chock becomes locked in an elevated position and it is impossible to lower it by exerting pressure thereagainst. Logs can therefore be loaded upon the car and will be held securely in place by the elevated chocks, said logs resting upon the beams 3 and located above the shafts 4 and 5 and their connections. When it is desired to dump the logs the car is placed in an inclined position and the operator goes to the elevated side of the car and pulls outwardly upon the operating arm 8. This causes the shaft to which the bar is connected to partly rotate and to pull on its link 22. The arms 21 of the chocks at the lower side of the car will thus be pulled inwardly simultaneously and the partial rotation of the trunnions which is thus produced serves to withdraw the shoulders 20 from engagement with the ratchet teeth and the chock is free to swing downward and move inwardly. The logs will therefore roll off of the lower side of the car and all danger of injury to the operator who is positioned at the other side thereof is eliminated.

What is claimed is:

1. An attachment for cars comprising parallel beams, means for securing the beams to a car platform, oppositely disposed chocks pivotally and movably mounted between the beams, fixed means for engaging the chocks when elevated only to hold them against sliding movement in one direction, and means carried by the beams for actuating the chocks.

2. An attachment for cars comprising beams, combined stop and guide devices fixedly carried thereby, chocks pivotally and slidably mounted within said devices, means carried by the chocks for engaging the devices only when the chocks are raised to limit the sliding movement of the chocks, and means carried by the beams for actuating the chocks.

3. An attachment for cars comprising beams, combined guide and stop devices carried thereby, chocks pivotally and slidably mounted within said devices, means integral with the chocks for engaging the devices to

limit the movement of the chocks in one direction, and separate means for elevating the chocks.

4. An attachment for cars comprising beams, combined guide and stop devices fixedly carried thereby, chocks pivotally and slidably mounted within said devices, means integral with the chocks for engaging the devices only when the chock is raised to limit the sliding movement of the chocks in one direction, and means extending toward one end of the beams for actuating the chock adjacent the other end thereof.

5. An attachment for cars comprising beams, a chock pivotally and slidably mounted between the end portions thereof, a shaft journaled within the beams, a crank arm carried thereby, a link connection between said arm and chock, and means cooperating with the chock for limiting its movement in one direction, said crank arm and link being disposed to lock the chock in an elevated position.

6. An attachment for cars comprising beams, a shaft journaled therein, chocks pivotally and slidably mounted between the beams, means cooperating with the chocks for limiting the movement of each chock in one direction, an arm upon each shaft, a link connection between said arm and one of the chocks, said arm and connection being disposed to lock the chock in an elevated position, and crossed oppositely extending means for actuating the shafts.

7. An attachment for cars comprising beams, ratchet bars secured to the adjoining faces of the beams, laterally offset longitudinal guides integral with said bars, a chock interposed between the bars, trunnions thereon slidably and pivotally mounted within the guides, said trunnions having shoulders for engaging the ratchet bars when shifted to a predetermined position, and means for actuating the chock.

8. An attachment for cars comprising beams, ratchet bars secured to the adjoining faces of the beams, laterally offset longitudinal guides integral with said bars, a chock interposed between the bars, trunnions thereon slidably and pivotally mounted within the guides, said trunnions having shoulders for engaging the ratchet bars when shifted to a predetermined position, a shaft journaled within the beams, a crank arm extending thereabove, a link connection between the arm and chock, said arm and connection being disposed to cooperate with the shoulders to lock the chock against movement when in elevated position.

9. The combination with a car platform; of cross beams mounted thereon, means carried thereby for detachably connecting the platform, shafts journaled within the beams and extending longitudinally of the platform, crossed actuating means connected to

the respective shafts and extending toward opposite sides of the platform, chocks pivotally and slidably mounted between the end portions of the beams, crank arms carried by the shafts, link connections between the arms and chocks, and means coöperating with the arms and connections for locking the chocks against movement when in elevated positions.

10 10. An attachment for cars comprising a chock, stop devices for engagement with

the chock when in one position, and means for lowering the chock to disengage it from said devices and for sliding the chock while in lowered position.

15

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH A. McCONNELL.

Witnesses:

FRANK J. COUD,
JAMES W. SWEENEY.

PLAINTIFF'S EXHIBIT B

Assignment.

Whereas Joseph A. McConnell, of the city of Dallas, State of Oregon, did obtain Letters patent of the United States numbered 901,815 dated Oct. 20, 1908, for improvements in Chock Attachment for Cars

And Whereas Clayton T. Eaid of City of Portland, State of Oregon, is desirous of acquiring an interest in the same:

NOW THEREFORE to all whom it may concern, be it known that, for and in consideration of the sum of \$1.00) one dollar to me in hand paid, the receipt of which is hereby acknowledged, and other valuable considerations, have sold, assigned and transferred and by these presents do sell, assign and transfer unto the said Clayton T. Eaid, of Portland, Ore., a ($\frac{1}{4}$) one fourth interest in and to the said invention, and letters patent, for, to and in the United States and all its territories, and for, to and in no other place or places; the same to be held and enjoyed by the said assignee within and throughout the above specified territory, but not elsewhere, for the life of the patent for his own use and behoof, and for the use and behoof of his legal representatives, to the full end of the term for which said letters patent are or may be granted.

76 *Clayton T. Eaid and Joseph A. McConnell*

Signed at the City of Dallas, County of Polk, State
of Oregon, this 28th day of June A D. 1913.

JOSEPH A. McCONNELL (L. S.) }

Signed in the presence of

OSCAR HAYTER

RALPH MILLER.

Plaintiff's Exhibit "D"

PLAINTIFF'S EXHIBIT "D"

0/27

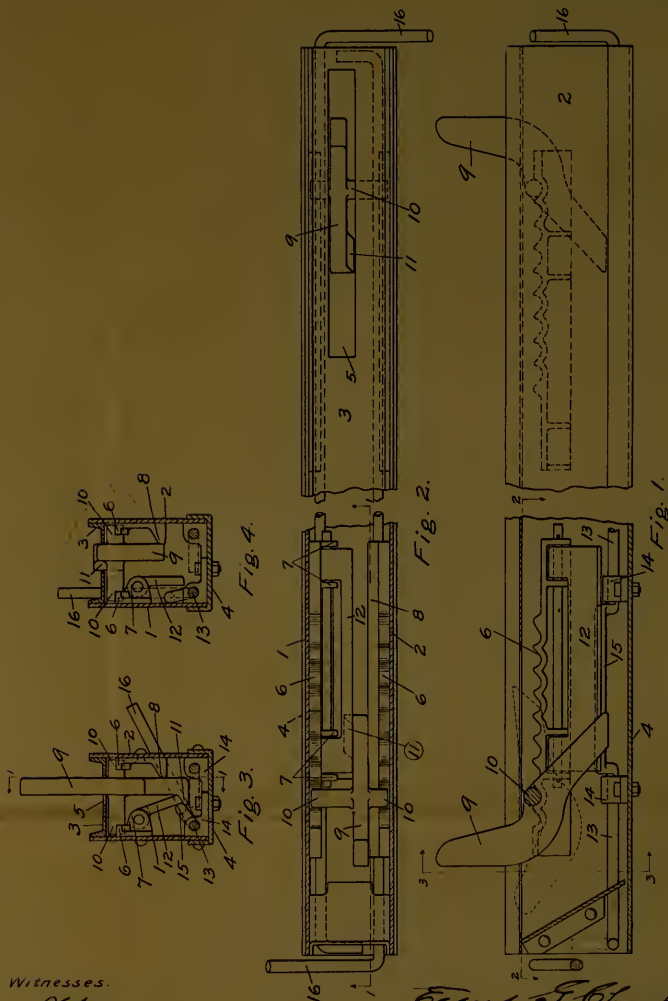
E. G. CHANDLER.

LOG BUNK.

APPLICATION FILED MAR. 7, 1913

1,066,795.

Patented July 8, 1913.



Witnesses.

J. Strong
W. Strong

E. G. Chandler
Inventor,
By *A. J. Rosenberg* Atty.

UNITED STATES PATENT OFFICE.

ELBERT G. CHANDLER, OF PORTLAND, OREGON.

LOG-BUNK.

1,066,795.

Specification of Letters Patent.

Patented July 8, 1913.

Application filed March 7, 1913. Serial No. 752,687.

To all whom it may concern:

Be it known that I, ELBERT G. CHANDLER, a citizen of the United States, residing in the city of Portland, county of Multnomah, and State of Oregon, have invented certain new and useful Improvements in Log-Bunks, of which the following is a specification.

My invention relates to log bunks, and more particularly to a bunk such as is mounted upon a flat car, truck, or other vehicle, to receive and hold logs or other objects which are capable of rolling or being otherwise accidentally misplaced during the transportation thereof.

Among the salient objects of my invention are,—to provide an improved bunk of the character referred to having holding chocks adapted to move down into the body of the bunk and below the uppermost supporting surface thereof, when released, whereby to permit the object held to be unloaded; to provide in a bunk of the character referred to, improved mechanism whereby the holding chocks can be released from the opposite side thereof, whereby to avoid the danger incident to releasing or tripping said chocks at the side of the car from which the load is to be discharged; to provide in a bunk of the character referred to improved mechanism for adjusting the holding chocks to different holding positions, whereby they can be readily and quickly adjusted without the necessity of releasing hooks, bolts, or other fastenings; to provide in a bunk of the character referred to improved mechanism for holding the chocks in operative positions and for tripping or releasing the same whereby to permit them to move down into the body of the bunk and thereby release the log or other object; and, in general, to provide an improved, simplified and practical bunk of the character referred to which can be manufactured and put upon the market at a minimum expense.

In order that others may understand my invention, I have shown in the accompanying sheet of drawings, one practical embodiment thereof, which I will now describe.

Figure 1 shows a side elevation of a bunk embodying my invention, with a part broken out to reduce the size of the figure, and with a part in longitudinal section to show the inner construction and arrangement thereof; Fig. 2 is a similar top plan view

with a portion of the top removed, and as if taken on line 2—2 of Fig. 1; Fig. 3 is a cross sectional view taken on line 3—3 of Fig. 1; and Fig. 4 is a view on the same line with the tripping mechanism released and the holding chock down in the body of the bunk.

Referring now to the drawings, the body of the bunk is preferably square or rectangular in cross section and is of such length as is best adapted for the car or other vehicle upon which it is to be used. The body can be made in a variety of ways, but as here shown, it is made of two heavy sheet metal side pieces 1 and 2, with a channel iron top 3, and a bottom plate 4, having upturned edges between which the side pieces 1 and 2 are placed and to which they are riveted. The top plate 2, at each end, is provided with a suitable slot or longitudinally extending opening, as 5, for a purpose hereinafter again referred to.

Secured to the inside of the side pieces 1 and 2, at each end of the bunk and opposite each other, are bracket members 6—6, having corrugated or notched upper edges, one member of each pair being provided with two pairs of hinge lugs, as 7—7, and the other member of each pair being provided with a flange-like portion, as 8, for a purpose hereinafter referred to.

A chock 9, having trunnions 10, substantially of the form shown in side elevation, Fig. 1, and top plan view, Fig. 2, is movably and changeably mounted through the opening or slot 5, in the notches of the bracket members 6—6, the upper end of said chock 9 being adapted to project above the top or supporting surface of the bunk for holding the logs or other objects placed thereupon, and the lower end thereof being provided with a lip or flange portion, as 11, for a purpose now to be described, it being understood, of course, that there is a chock at each end of the bunk.

Hingedly mounted between the hinge lugs 7—7, upon one of each pair of brackets 6—6, is a swinging plate or member 12, the lower edge of which is slightly beveled, as indicated in Figs. 3 and 4, this swinging member being adapted to be moved outwardly, as indicated in Fig. 3, to engage the lip or flange 11, upon the outer end of the chock 9, which lip or flange, it will be noted, is also beveled, and adapted to have a flat engagement with the edge of the swinging

member 12. It is to be noted also that the angle of engagement between the end of the swinging member 12 and the lip or flange 11 of the chock is such, relative to the horizontal component of the pressure between the two surfaces, as to overcome the friction therebetween, so that when the swinging member 12 is released by the movement of the operating rod hereafter referred to, the strain on the chock 9 which causes its lower end to rise, forces the swinging member laterally to the position shown in Fig. 4 and thereby allows the chock to rock on its pivot bearing. The lip or flange portion 8 on the opposite bracket, serves as a bearing against which the opposite side of the chock 9 bears and by means of which said chock is prevented from being moved laterally.

The swinging member 12, at opposite ends of the bunk, are moved outwardly by means of operating rods mounted longitudinally of the bunk and in the lower corners thereof, as indicated by the numerals 13—13, said rods being held in suitable bearing blocks 14—14, each of said bearing rods being provided adjacent the swinging member 12—12, with offset portions, as at 15, adapted to move outwardly against said swinging member 12, when said rods are turned, as indicated in Fig. 3. Each of said rods is provided at its operating end, with a long, up-turned portion, as 16, which serves as a lever or handle, and at its opposite end with a shorter bent portion 17, by means of which said rod can be turned, when there is no load, for the purpose of adjusting the chock at that end; that is, it is possible for one man to turn the rod with one hand and hold the chock with the other.

The chocks 9—9, at the opposite ends of the bunk, it will be noted, are positioned toward opposite sides of the bunk. The operating rods are at opposite sides of the bunk, the swinging members 12—12 are supported at opposite sides of the bunk, and the holding lips 11—11 on the down ends of said chocks, face in opposite directions, as can be understood from Fig. 2. The longer operating lever ends 16—16 of the operating rods 13—13 are, therefore, at opposite ends of the bunk, and each forms a part of the rod which operates the holding and releasing mechanism of the chock at the farther end of the bunk from which it is located. Thus, if it is desired to release a chock at one side of the car and to discharge the log or other object from that side of the car, the operator would go to the opposite side of the car and move the long lever or handle 16, which releases the swinging member 12 at the other end of the bunk body, being the opposite side of the car from that on which he is standing, and the chock at that side of the car would be released and allowed to move down into the

bunk body and into a position below the uppermost supporting edges of the bunk body, whereby any log or other object is free to roll off the end of the bunk.

It is intended that when the offset portion 15 of one of the operating rods 13 is turned downwardly so as to move the swinging member 12 outwardly and to hold it there, that said offset portion 15 shall be at such an angle to said swinging member 12 that the latter cannot move back and release the chock until the operating rod is turned. The angular engagement between the end of the swinging member 12 and the lip 11 of the chock 9 is such that when said operating rod is turned, the swinging member 12 is automatically forced back, as shown in Fig. 4.

While I have shown and described but one embodiment of the invention, I am aware that changes can be made therein without departing from the spirit thereof, and I do not, therefore, limit the invention to the particular form here shown for illustrative purposes, except as I may be limited by the hereto appended claims.

I claim:

1. In a log bunk, a body oppositely disposed supporting or bearing seats therein, a holding chock having supporting trunnions adapted to said bearing seats and movable bodily to different pivotal locations on said seats, and a movable part for holding said chock in its up or operative position.

2. In a log bunk, a body oppositely disposed supporting or bearing seats therein, a holding chock pivotally mounted therein and movable bodily to different bearing seats, and a holding member for holding said chock in operative position in any of said locations.

3. In a log bunk, a body provided with series of notches, a holding chock pivotally mounted in said notches and movable bodily to different notches to change its operative location in said body, and a holding member for holding said chock in operative position in said body.

4. In a log bunk, a body, a pivotally mounted holding chock therein and adjustable to different pivotal locations, an operating mechanism, operable from the end of the body of the bunk, for releasing said chock, whereby it can be moved on its pivotal bearing.

5. In a log bunk, a body provided with oppositely disposed supporting or bearing seats, a pivotally mounted holding chock with supporting trunnions adapted to said seats and movable upon its pivot bearing to a position below the supporting surface of said body, and a holding and tripping mechanism operable from the opposite end of the bunk body.

6. In a log bunk of the character referred

to, in combination, a bunk body having oppositely disposed bearing seats, a pivotally mounted holding chock with trunnion like members adapted to move upon its pivot
 5 bearing down into said body, said chock being movable bodily to different bearing seats, a movable part adapted to engage and hold said chock in its up or operative position, and an operating member for moving
 10 said movable part.

7. In a log bunk of the character referred to, in combination, a bunk body, a pivotally mounted holding chock adapted to move upon its pivot bearing down into said body,
 15 said chock being adjustable to different pivotal locations, a movable part adapted to engage and hold said chock in its up or operative position, and an operating member for moving said movable part.

8. In a log bunk, a bunk body provided with series of oppositely disposed supporting notches or seats, a holding chock pivotally mounted therein and adjustable to different locations therein, a movable part for
 25 holding said chock in its up or operative position, and operating mechanism for moving said part.

9. In a log bunk, a bunk body provided with series of oppositely disposed supporting notches or seats, a holding chock piv-
 30

otally mounted therein and adjustable to different locations therein, a movable part for engaging and holding said chock in operative position, and an operating rod extending to the opposite end of said body for
 35 moving said part.

10. A log bunk of the character referred to comprising in combination a bunk body of hollow construction with longitudinally
 40 extending opening in its upper side; bracket members having corrugated upper edges mounted opposite each other adjacent said opening, a chock member pivotally supported through said opening and upon said
 45 bracket members and adjustable to different positions thereon, said chock being adapted to move upon its pivotal mounting down into said bunk body, a movable member adapted to be moved into holding engagement with said chock, and an operating rod
 50 for moving said movable member into engagement with said chock, substantially as described.

Signed at Portland, Oregon, this 26th day of February, 1913.

ELBERT G. CHANDLER. [L. S.]

In presence of—
 J. C. STRENG,
 R. B. FRENCH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

Plaintiffs Exhibit G.

Supplemental Agreement.

Supplemental agreement entered into this 28th day of March, 1912, by and between C. T. Eaid, of Portland, Oregon, party of the first part, and Twohy Brothers Company a corporation organized under the laws of the State of Oregon, having its principal office in the city of Portland, Oregon, party of the second part, witnesseth:

That, whereas the parties hereto have heretofore, to wit, on the 22nd day of December, 1911, entered into a certain contract for the manufacture and sale of the Eaid Logging Bunk, to be manufactured in pursuance of the United States letters patent covering the same, as procured by the said party of the first part, and

Whereas owing to the fact that there are other bunks on the market presenting a competition in the sale of such equipment and are sold for a less sum than is provided for in contract heretofore entered into between the parties, and in order to meet said competition it will be necessary for the parties hereto to modify said contract in the agreed selling price to consumers, and the said first party has conceded the necessity for making a reduction in the amount of royalty as is hereinafter provided:

Now therefore, it is agreed that the second paragraph, on page 1 of said contract heretofore entered

into between the parties on December 22, 1911, be modified so as to read as follows, to-wit:

“Second. The party of the second part shall sell said Log bunks at such price as it may determine between the minimum price of seventy dollars (\$70.00) per pair and the maximum price of seventy five dollars (\$75.00) per pair, and it shall pay a royalty to the party of the first part upon sales made to actual consumers in orders of less than one hundred pairs of the sum of ten dollars (\$10.00) per pair, and upon orders of more than one hundred pairs a royalty of eight dollars (\$8.00) per pair.”

It is the intention of the parties hereto to not in any way modify, change or alter the terms and conditions of said contract of the 22d day of December, 1911, except as is hereinbefore specifically set forth, and settlements shall be made as is provided in said first named contract.

In witness whereof the parties hereto duly authorized have executed this supplemental agreement in duplicate this 28th day of March, 1912.

TWOHY BROTHERS COMPANY

By John Hamphen. treasurer
C. T. EAID.

Defendants Exhibit 1.

This agreement made and entered into this 22d day of Dec, 1911 by and between C. T. Eaid, of Portland, Oregon, party of the first part and Twohy Brothers Company, a corporation organized under the laws of the State of Oregon, having its principal office in the city of Portland, Oregon, party of the second part, witnesseth

That whereas the party of the first part has secured United States lettres patent covering a certain device known as the Eaid Log Bunk, or Eaid Logging Bunk, and is desirous of making arrangements with the party of the second part to make and sell the same

Now therefore, to that end it is agreed between the parties hereto as follows:

First, the party of the second part shall manufacture and place upon the market said patented device in such place and in such manner as it may determine best to bring about the greatest number of sales of same, and it will guarantee the purchaser thereof against defective workmanship and material, and that it will vigorously and in good faith prosecute the manufacture and sale of said bunks, commencing on the 1st day of March, 1912, and continuing thereafter during the life of this contract, or until the same is terminated in the manner hereinafter provided for.

Second, The party of the second part shall sell said Log Bunks at such price as it may determine between the minimum price of eighty five (\$85.00) per pair and the maximum price of one hundred (\$100.00) Dollars per pair, and it shall pay a royalty upon each sale to the party of the first part of 40% of the difference between the cost of manufacture and the selling price, and for the purpose of definitely fixing the amount of this royalty it is stipulated and agreed that the cost of manufacture of said bunks is sixty (\$60.) Dollars per pair, and that the average selling price is to be ninety five dollars per pair, and that the royalty or compensation too the party of the first part upon sales as aforesaid is therefore determined to be fourteen (\$14.) Dollars per pair, or seven (\$7.00) Dollars per bunk.

Third, The party of the first part undertakes and agrees that the party of the second part shall have the full and exclusive right of manufacture and sale of said bunks, of which he is the patentee, as aforesaid, during the life of said patent, in all parts of the United States, and in all other countries where said invention may be patented, or where the same may be introduced during the life of said patent, and this exclusive right and protection attaches not only to the said device in its present condition and state of perfection, but it obtains and shall attach and be enjoyed by the party of the second part to all improvements, modifications and changes which may be made or accomplished by said party of the first part, or through his instrumentality during the life

of said patent, provided that the terms of this agreement shall be carried out and complied with by the party of the second part as herein stipulated.

Fourth. The party of the first part undertakes and agrees to protect and defend said patented device against all infringements, suits or actions arising or which may arise during the life of this contract, and undertakes to and does hold the party of the second part harmless from any actions, suits or proceeding that may arise or be brought by any party or parties whomsoever, wherein the exclusive right of the party of the first part as patentee of said device, or of any invention that he may make in connection therewith is challenged or contested; that the party of the first part agrees to turn over to the party of the second part all data that is or may come into his possession which may in any way assist the party of the second part in manufacturing advertising or selling said device.

Fifth. It is the intention, and it is understood and agreed that after the expiration of three years from the date hereof the said Eaid shall have the right to terminate and cancel this contract, provided he shall not have realized in pursuance of the terms of this contract, an amount equal to \$3000 as his share of the proceeds of the sale of said bunks; and in case said right is exercised Twohy Brothers Company shall promptly dispose of all bunks in stock at the time of said cancellation upon the terms herein provided. The contract shall thereupon be declared

null and void, and both parties released therefrom, after a settlement shall have been made between them on all business done under this contract.

Sixth. The party of the first part shall be promptly paid from time to time as said bunks are sold and collections made upon said sales, and the party of the second part shall make a report to the party of the first part within twelve months from the date of such sales, at which time a settlement shall be made between the parties as provided in the second paragraph herein, and the party of the first part shall have access at all reasonable times to the books of the party of the second part pertaining to the business transacted under this contract, for the purpose of verifying statements and reports by the party of the second part of collections made.

Seventh: As said bunks are manufactured they shall bear the serial date and be numbered consecutively beginning with number one. Quarterly statements shall be given in writing to said party of the first part of the progress of said manufacture and sale of said bunks, and said statements shall report in detail the consignee, vendee, terms of sale, payments, and any and all information that properly relates to the manufacture and sale of said device.

Eighth. It is agreed that the party of the second part shall not dispose of or assign this contract, or any of the rights thereunder, or any of its rights to said Eaid Log Bunk or any of its rights in the man-

ufacture or sale thereof, without the written consent of the party of the first part.

In witness whereof the parties hereto duly authorized have executed this agreement in duplicate this 22nd day of Dec., 1911.

TWOHY BROTHERS COMPANY

By JOHN HAMPSHIRE treasurer

C. T. EAID.

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Defendant's Exhibit 2

DEFENDANT'S EXHIBIT 2

C. T. EAID.

LOG BUNK AND STAKE FOR RAILWAY CARS.

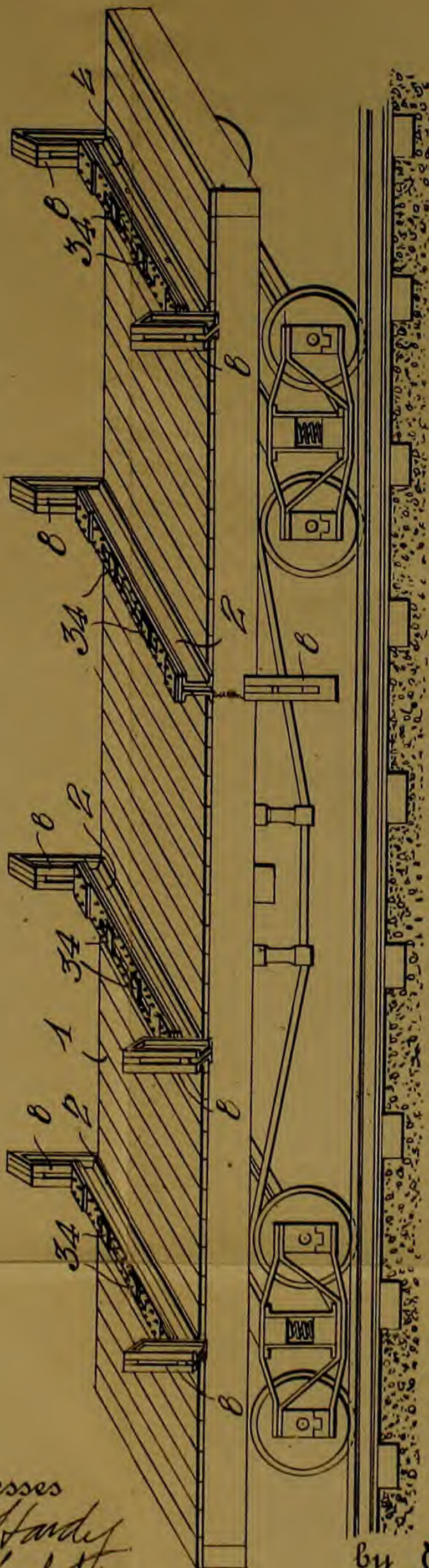
APPLICATION FILED DEC. 29, 1910. RENEWED APR. 26, 1912.

1,050,929.

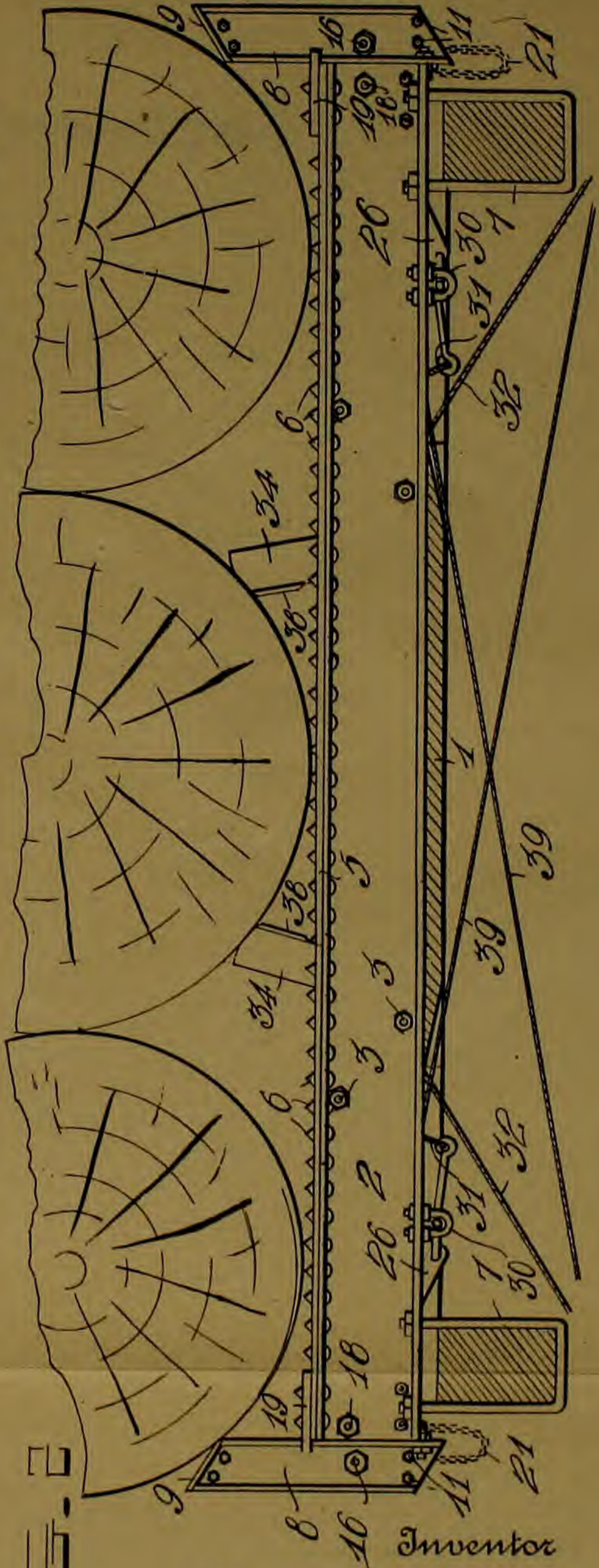
Patented Jan. 21, 1913.

3 SHEETS-SHEET 1.

FIG. 1



Witnesses
C. R. Hardy
O. B. Hopkins



by

A. B. Wilson & Co.

Attorneys

Clayton T. Eaid

Inventor

C. T. EAID.

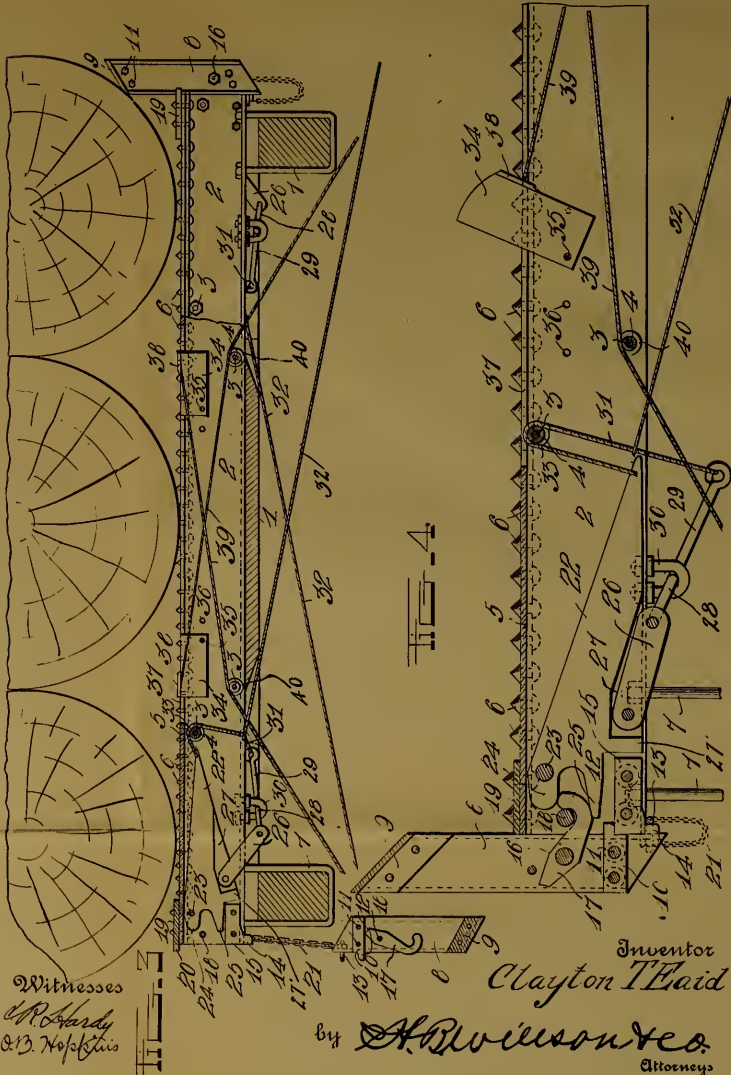
LOG BUNK AND STAKE FOR RAILWAY CARS.

APPLICATION FILED DEC. 29, 1910. RENEWED APR. 25, 1912.

1,050,929.

Patented Jan. 21, 1913.

3 SHEETS-SHEET 2.



C. T. EAID.

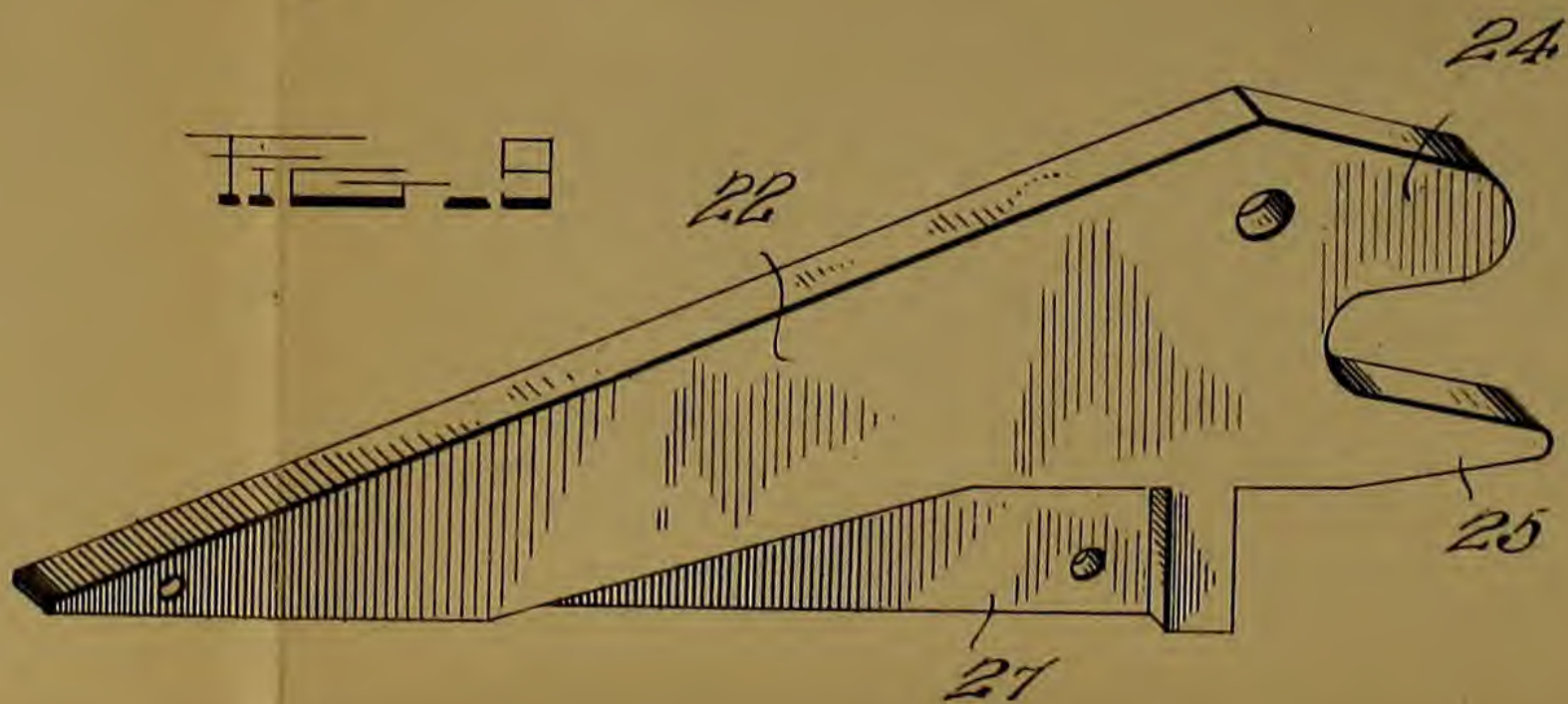
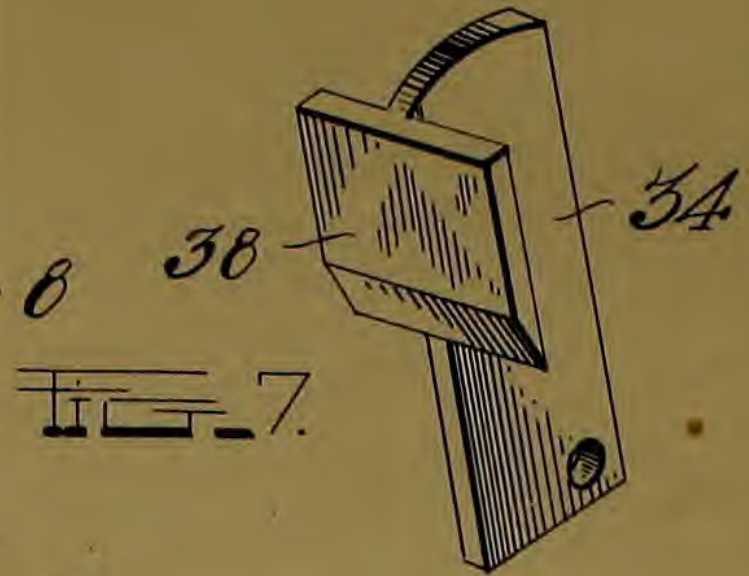
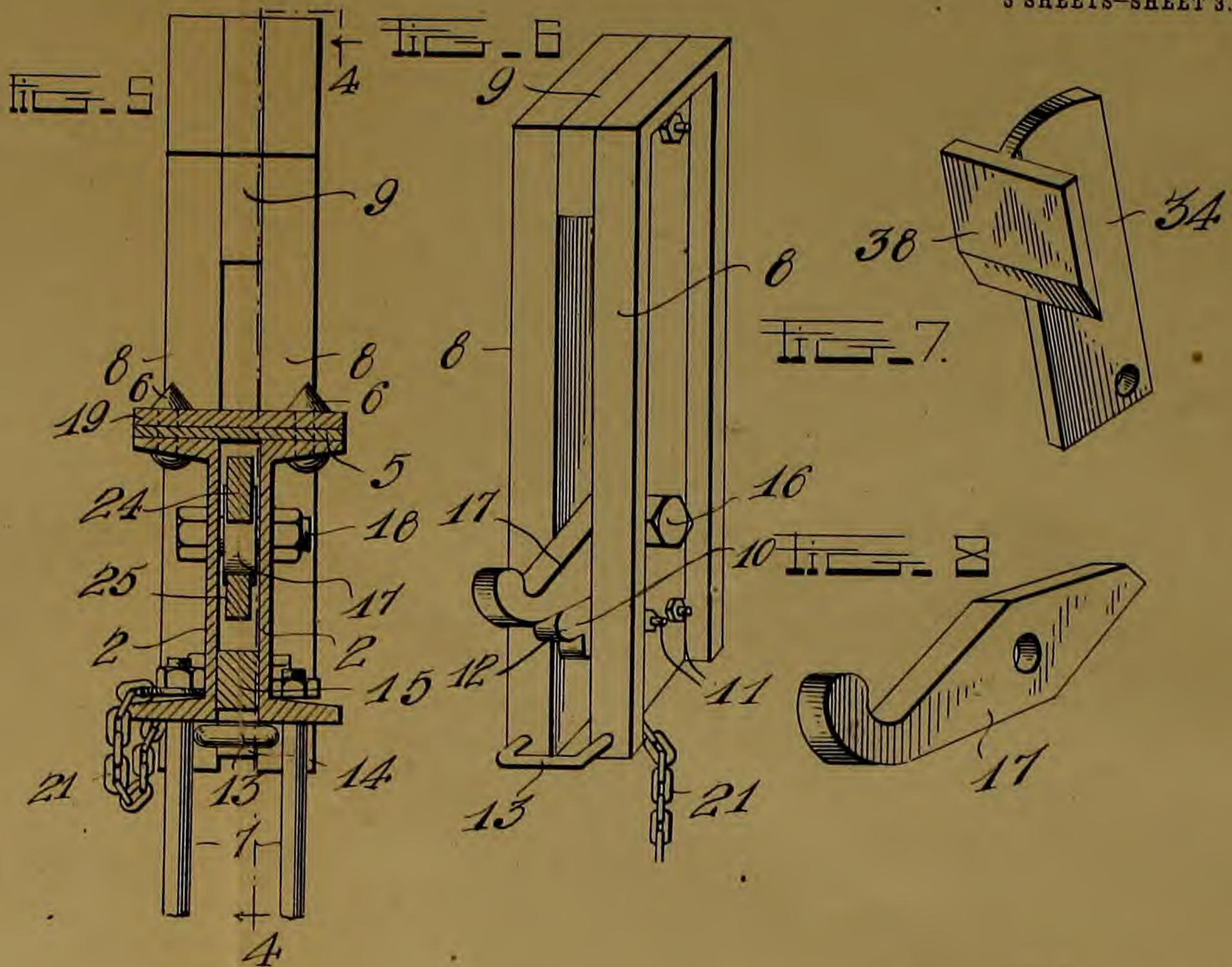
LOG BUNK AND STAKE FOR RAILWAY CARS.

APPLICATION FILED DEC. 29, 1910. RENEWED APR. 25, 1912.

1,050,929.

Patented Jan. 21, 1913.

3 SHEETS-SHEET 3.



Witnesses
C. P. Hardy
D. B. Thompson

Inventor
Clayton T. Eaid
by A. B. Wilson & Co.
Attorneys

UNITED STATES PATENT OFFICE.

CLAYTON T. EAID, OF PORTLAND, OREGON.

LOG-BUNK AND STAKE FOR RAILWAY-CARS.

1,050,929.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed December 29, 1910, Serial No. 599,830. Renewed April 25, 1912. Serial No. 693,194.

To all whom it may concern:

Be it known that I, CLAYTON T. EAID, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Log-Bunks and Stakes for Railway-Cars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in log bunks and stakes for railway cars.

One object of the invention is to provide a log bunk having an improved construction of stake and means whereby the same may be released from either side of the car thus preventing danger of the log rolling out onto and injuring the operator when the stakes are removed.

Another object is to provide a log bunk having arranged therein chock blocks adapted to be operated from either side of the car.

With these and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings: Figure 1 is a perspective view of a flat car showing my invention applied thereto; Fig. 2 is an enlarged vertical cross section of the car showing one of the bunk beams and the stakes and chock blocks therein in operative position; Fig. 3 is a similar view showing the stakes and blocks in inoperative positions; Fig. 4 is an enlarged vertical longitudinal sectional view through one end of one of the beams showing the parts in operative position, the plane of the section being indicated by line 4—4 of Fig. 5; Fig. 5 is a vertical cross section of one of the beams; Fig. 6 is a perspective view of one of the stakes; Fig. 7 is a similar view of one of the chock blocks; Fig. 8 is a similar view of one of the stake holding hooks; Fig. 9 is a similar view of one of the stake holding levers of the beams; Fig. 10 is a similar view of one of the lever locking links.

Referring more particularly to the drawing, 1 denotes a flat car which may be of any suitable construction and on which are arranged at suitable intervals these improved log bunks 2 of which there may be any desired number. The bunks 2 are preferably

formed of channel iron bars which are bolted together by a series of fastening bolts 3 and are spaced a suitable distance apart by sleeves 4 arranged on the bolts between the bars as shown. To the flanges of the upper edges of the bars are secured connecting plates 5, said plates being bolted to the flanges of the bars by bolts 6 having cone shaped or pointed heads which engage the logs on the bunks and prevent the same from shifting longitudinally. The beams or bars forming the bunks 2 are preferably secured to the car by means of U-shaped bolts or attaching bars 7 which are passed around the side sills of the car frame and have their threaded upper ends projecting through apertures formed in the lower flanges of the beams, said threaded upper ends having screwed thereon clamping nuts whereby the beams are clamped down into tight engagement with the floor of the car.

In connection with my improved bunks I provide log holding stakes 8 which are adapted to be engaged with and secured to the opposite ends of the beams forming the bunks 2 and which are preferably formed of two channel iron bars of suitable length and which have their upper and lower edges beveled or formed at an angle as shown. The bars forming the stakes 8 are spaced apart at their upper ends by T-shaped cap plates 9 the upper portion of which covers the upper ends of the bars forming the stake and forms a finish for the latter. Through the bars and the downwardly projecting portion of the spacing plates 9 is inserted a clamping bolt by means of which the bars of the stake are secured together in spaced relation. The lower ends of the bars are spaced apart by spacing blocks 10 through which and through the adjacent portions of the bars are arranged clamping bolts 11 whereby said lower ends of the bars are secured together in spaced relation. Each spacing block 10 has formed on one end a lug 12 which projects beyond the inner edges of the bars for a purpose hereinafter described.

On the inner side of each stake near its lower end is secured a horizontally disposed laterally projecting loop bolt 13 the free ends of which are engaged with apertures formed in the inner flanges of the bars forming the stake and are secured by nuts as shown. The loop end of each bolt 13 is adapted to be engaged with a downwardly

projecting lug 14 formed on a spacing block 15 arranged between the beams of the bunks and secured thereto by suitable fastening bolts. The outer end of the spacing blocks 15 are adapted to be engaged by the lugs 12 on the spacing blocks 10 of the stakes when the latter are engaged with the opposite ends of the bunk beams, said lugs and blocks thus forming a support for the stakes the lower ends of which are firmly bound to the ends of the beams by the loops 13.

Arranged through the beams of the stakes 8 near their lower ends are transversely disposed bolts 16 on which are pivotally mounted the inner ends of stake holding hooks 17 the outer ends of which are adapted to project into the space between the outer ends of the bunk beams and into engagement with fastening bolts 18 which are arranged through the beams as shown in Fig. 4. On the top plate of the beams of the bunks at their opposite ends are secured stake bracing plates 19 having on their outer ends lugs 20 which engage the opposite sides of the stakes and firmly hold the same against lateral or sidewise movement. To one end of one of the beams of the bunks is secured one end of a stake holding chain 21 the other end of which is secured to the stake thereby preventing the same from becoming lost or mislaid when disconnected or removed from the end of the bunk beams.

In order to provide for the engagement of the stake fastening hook 17 with the fastening pins 18 in the ends of the bunk beams and to effect the disengagement of said hooks from the bolts for the purpose of releasing the stakes I provide a hook operating lever 22 which is pivotally connected at its outer upper end with a supporting bolt 23 arranged through the bunk beams as shown. The lever 22 is pivotally mounted on the bolt 23 between the beams of the bunks and on the outer end of said lever is formed an outwardly projecting hook releasing lug or nose 24 below which and spaced a suitable distance therefrom is formed a hook guiding and supporting lug 25 which, when the lever 22 is in its normal position engages the under side of the inner end of the hook 17 and holds the same into operative engagement with the bolt 18 (see Fig. 4.) In order to hold the levers 22 in their normal position and thus prevent the casual disengagement of the hooks 17 from the pins 18 in the opposite ends of the bunk beams I provide suitable lever locking devices which are in the form of links 26, one end of which is pivotally connected to downwardly projecting extensions 27 formed on the under side of the levers 22 and which are pivotally connected at their outer ends to cranks 28 of link operating levers 29 which are pivotally mounted in suitable bearings 30 arranged on the under sides of

the beams as shown. The inner ends of the levers 22 and levers 29 are connected together by cables 31 to which are connected operating cables 32 leading to the opposite sides of the car. When the pull is exerted on the cables 31 and 32 the free ends of the levers 22 and 29 will be swung upwardly thereby rocking the crank 28 of said lever 29 and swinging the end of the link 26 connected with said crank 28 downwardly which will exert a downward and inward pull on the outer end of the lever 22. When the inner end of the lever 22 is thus swung upwardly the supporting lug 25 thereof will be swung downwardly and inwardly thereby removing said lug from the path of the hook of the member 17 and the hook releasing nose or lug 24 of said lever 22 will push the hook 17 down out of engagement with the bolt 18, thereby releasing the stake which will drop out of engagement with the end of the bunk beams. The cables 31 which are connected to the inner ends of the levers 22 and to levers 29 pass upwardly over guide pulleys or sleeves 33 arranged between the beams of the bunks adjacent to and above the inner ends of the levers 22 as shown.

When it is desired to replace a stake at either end of one of the bunk beams the loop bolt 13 on the lower end of the stake is engaged with the lug 14 on the spacing block at the adjacent end of the beam and the stake is swung inwardly whereupon the supporting lug 12 of the spacing block 10 will engage the upper side of the block 15 in the beam. The cables 31 and 32 are pulled to swing the inner end of the lever 22 upwardly and the lug 25 on the outer end thereof downwardly or away from the bolt 18 to permit the inner end of the hook to enter between the lug 25 and the bolt whereupon when the cables 31 and 32 are released the inner end of the lever 22 will drop by gravity thus causing the lug 25 to force the inner end of the hook up into engagement with the pin 18 thereby securely fastening the stake to the ends of the bunk beams. When the cables 31 and 32 are released the free ends of levers 22 and 29 will swing downwardly by gravity which will cause the crank 28 of lever 29 to move upwardly carrying with it the end of the link 26 connected thereto, thereby forcing the other end outward and when the free end of the lever 29 is forced downward by the operator until the crank 28 passes the center of the fulcrum of said crank 28, the latter will engage the lower faces of the bunk beams and the parts will be automatically locked in the position shown in Fig. 4. It will be noted that this locking is effected by the passing of the crank 28 above the plane passing through the fulcrum of the lever 29 and the pivot connecting the link 26 to the lever 22.

When the parts are thus locked it will be seen that the hook 17 will be held against casual disengagement from the bolt or keeper 18. The operator may obtain access to the lever 29 to lock the parts by going under the car if necessary.

In addition to the stakes 8 I also provide said bunk beams with chock blocks 34 in the form of plates having their lower ends pivotally mounted between the beams of the bunks by means of pivot bolts 35 which are adapted to be engaged with a series of alined pivot holes 36 arranged in the beams of the bunks as shown. The chock blocks 34 are pivotally connected at their lower outer corners with the bolts 35 and project upwardly through slots 37 formed in the connecting plates 5 of the beams. The upwardly projecting ends of the plates of the chock blocks have formed on their inner edges flanged log engaging surfaces 38 and preferably have their upper ends rounded or formed at a slight angle as shown. By thus pivotally connecting the chock blocks between the beams of the bunks, said blocks may be swung upwardly to operative positions or downwardly to inoperative positions between the beams. When swung upwardly to operative positions the inner edges of the flanges 38 on the inner sides of the blocks engage the upper side of the plate 5 of the beams and thus limit the inward movement of the blocks. When the blocks are swung downwardly to an inoperative position the downward movement of the flanges 38 with the upper surface of the beams. The blocks are swung upwardly and held in operative position against the pressure of the logs by operating cables 39 which are connected to the inner edges of the blocks and pass between the beams of the bunks and over suitable guide rollers 40 to the opposite sides of the car whereby the blocks on either side of the log may be released from the opposite side of the car and the log thus permitted to roll off the latter without danger of injuring the operator.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claims.

Having thus described my invention what I claim is:

1. A log bunk for cars comprising beams, means to fasten said beams to the bottom of the car, stakes arranged on the opposite

ends of the beams, fastening hooks carried by said stakes, hook-engaging means on said beams for engagement by said hooks whereby said stakes are removably secured to the ends of the beams, hook releasing levers arranged between said beams, means on said levers to hold said hooks in engagement with said hook-engaging means, means on said levers to disengage the hooks thereby releasing the stakes, means to hold said levers in operative engagement with the hooks whereby the latter are prevented from being casually disengaged from said hook-engaging means on the beams, and means whereby the levers are operated from opposite sides of the car to release the stakes.

2. A log bunk for cars comprising transversely disposed beams, means to secure said beams to the car, stakes arranged on the opposite ends of the beams, means to secure said stakes in detachable engagement with the ends of the beams, means whereby the stakes on the ends of the beams at one side of the car may be released from the opposite side thereof, chock blocks arranged on said beams on opposite sides of the center thereof and means whereby said chock blocks may be operated from the opposite sides of the car.

3. A log bunk for cars comprising pairs of transversely disposed beams secured together in spaced relation, means to fasten said beams to the bottom of the car, stakes arranged on the opposite ends of the beams, stake attaching bolts arranged in said beams, fastening hooks secured to said stakes and adapted to be engaged with said bolts whereby said stakes are removably secured to the ends of the beams, hook releasing levers arranged between said beams, means on the outer ends of said levers to hold said hooks into engagement with said fastening bolts and means to disengage the hooks from the bolts thereby releasing the stakes, means to hold said levers in operative engagement with the hooks whereby the latter are prevented from being casually disengaged from the bolts in the ends of the beams and means whereby the levers are operated from opposite sides of the car to release the stakes.

4. A log bunk for cars comprising pairs of transversely disposed beams secured in spaced relation, longitudinally slotted connecting plates arranged on the upper sides of the beams, bolts to secure said plates to the beams, said bolts having conical or pointed heads which project above the upper side of the plates, spacing and stake supporting blocks arranged between the beams at their opposite ends and adjacent to their lower edges, lugs formed on said blocks and projecting below the lower edges of the beams, stake holding plates secured to the outer ends of said connecting plates, said

stake holding plates having formed on their outer ends stake engaging lugs, log holding stakes arranged on the opposite ends of said beams, supporting lugs arranged on the lower ends of said stakes and adapted to project between the beams of the bunks and into engagement with the stake supporting blocks therein, looped stake holding bolts secured to the lower ends of the stakes and adapted to be engaged with the lugs on the lower edges of the spacing blocks of said beams, stake holding bolts arranged through the opposite ends of the beams, stake holding hooks pivotally connected to the stakes and adapted to be inserted between the opposite ends of the beams and into operative engagement with said bolts whereby the stakes are removably held in position, and means to release said hooks and thereby disengage the stakes from the ends of the beams.

5. A log bunk for cars comprising pairs of transversely disposed beams, said beams being secured together in spaced relation, log holding stakes arranged on the opposite ends of said beams, said stakes comprising pairs of bars secured together in spaced relation, combined spacing and finishing plates arranged on the upper ends of said bars, means to detachably support and fasten the lower ends of the stakes to the outer ends of the beams, stake attaching bolts arranged through the opposite ends of the beams, stake fastening hooks pivoted to said stakes and adapted to be engaged with the fastening bolts in the ends of the beams, hook holding and releasing levers pivotally mounted between said beams, hook guiding and supporting lugs formed on the outer ends of said levers and adapted to engage the inner ends of the hooks and to hold the latter in operative engagement with their fastening bolts, hook detaching lugs also formed on the outer ends of said levers and

adapted to disengage the hooks from their bolts when said levers are operated, cranked locking levers pivotally mounted on the under side of said beams, links to connect said cranks with said hook holding and releasing levers whereby the latter are locked in operative position to hold said hooks in engagement with the bolts, operating cables connected to the ends of said levers whereby the latter are simultaneously operated from the opposite side of the car to release said hooks and thereby detach said stakes, and chock blocks having an adjustable and pivotal connection with said beams to hold the logs in position thereon.

6. A log bunk for cars comprising pairs of transversely disposed beams secured together in spaced relation, means to secure said beams to the car, longitudinally slotted connecting plates secured to the upper edges of said beams, log holding stakes arranged on the opposite ends thereof, means to detachably secure said stakes in place whereby the logs may be released from the opposite side of the car, supporting bolts adjustably arranged in said beams, chock blocks pivotally mounted on said bolts and adapted to project up through the slotted connecting plate of the beams, flanges formed on the inner edges of the upwardly projecting portions of said blocks and operating cables connected to the lower ends of the blocks whereby each of said blocks is swung upwardly from the opposite side of the car and held in operative position above the beams.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CLAYTON T. EAID.

Witnesses:

J. A. HOSBOR,
R. E. MASON.

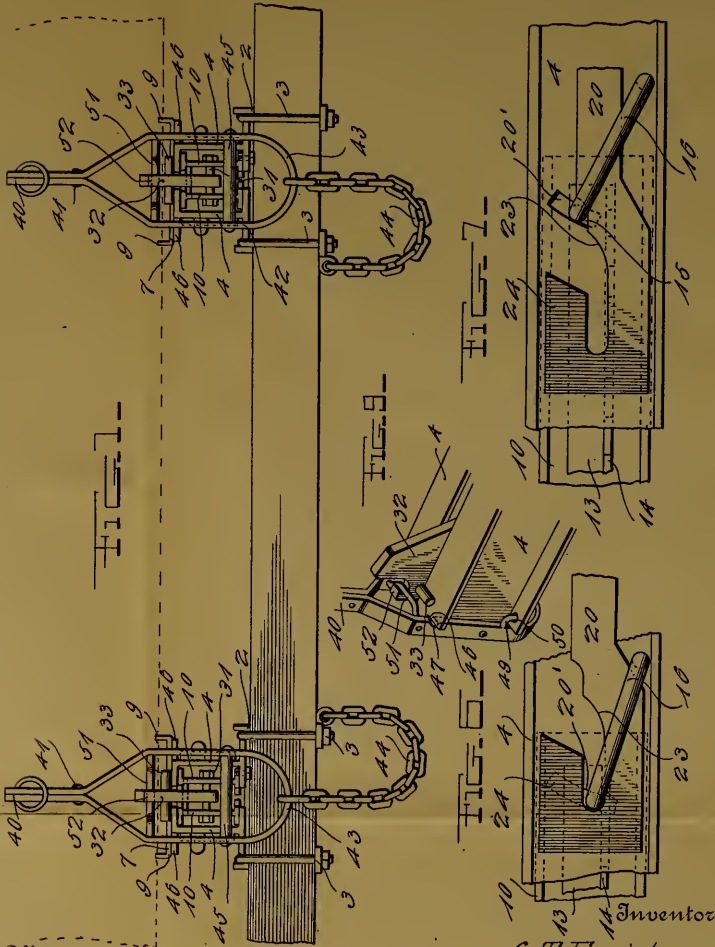
Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

C. T. EAID.
 LOGGING CAR BUNK AND STAKE.
 APPLICATION FILED FEB. 12, 1912.

1,055,150.

Patented Mar. 4, 1913.

2 SHEETS-SHEET 1.



Witnesses

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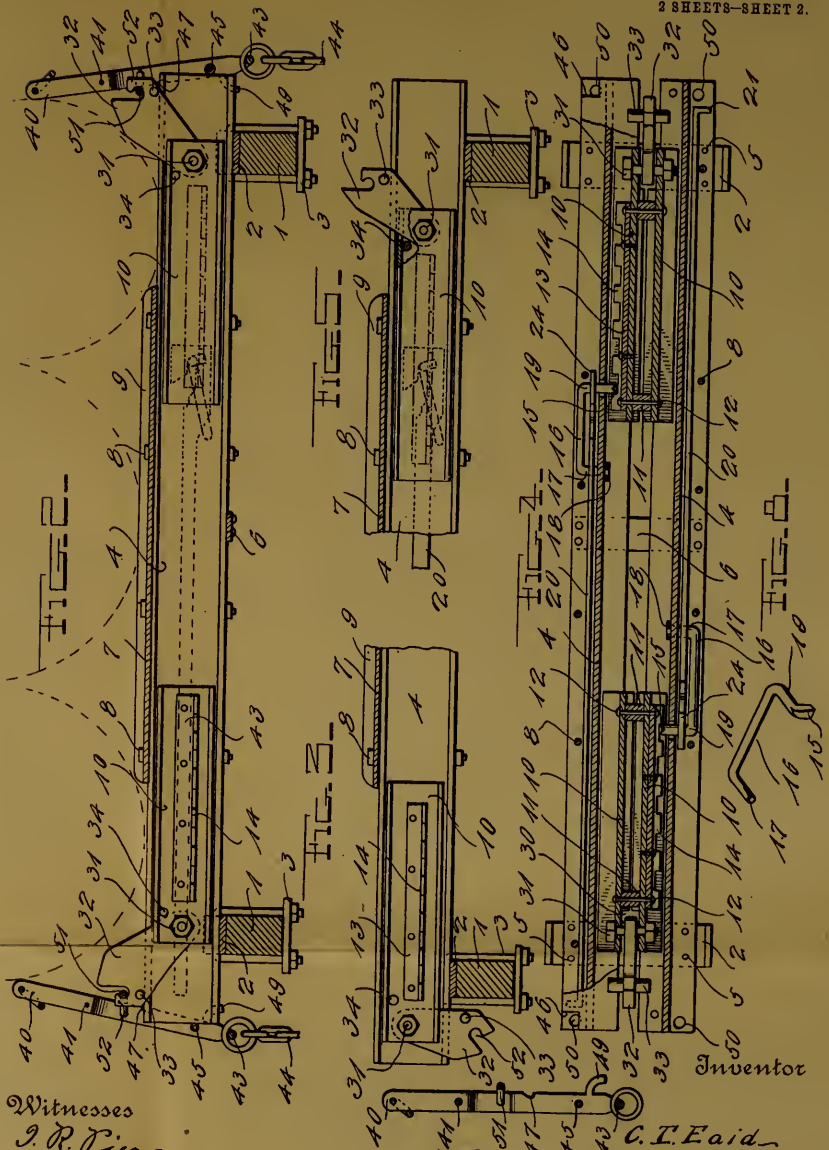
Defendant's Exhibit 3.

DEFENDANT'S EXHIBIT 3.

1,055,150.

Patented Mar. 4, 1913.

2 SHEETS-SHEET 2.



Witnesses

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UNITED STATES PATENT OFFICE.

CLAYTON T. EAID, OF PORTLAND, OREGON.

LOGGING-CAR BUNK AND STAKE.

1,055,150.

Specification of Letters Patent.

Patented Mar. 4, 1913.

Application filed February 12, 1912. Serial No. 677,008.

To all whom it may concern:

Be it known that I, CLAYTON T. EAID, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Logging-Car Bunks and Stakes; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railway rolling stock, and more especially to freight cars adapted for conveying logs; and the object of the same is to produce improved means for holding a load of logs, poles, or lumber and for releasing the same from that side of the car where it will be impossible for the workmen to be injured by the falling of the load so released and dropped. This and other objects are carried out by the construction hereinafter more fully described and claimed, and as shown in the drawings wherein—

Figure 1 is a side elevation of the sill of the car truck, giving an end view of two of my improved bunks and an elevation of two of my improved stakes as used in connection therewith. Fig. 2 is a side elevation of one of my improved bunks with the nearer I-beam removed and the top plate in section, and both stakes engaged by the chock blocks. Fig. 3 is a similar view of one end of the device showing the carriage as having been moved to disengage the chock block from the stake and the latter in the act of falling. Fig. 4 is a plan view of the device with the stake omitted, a considerable portion of the view being in section on a line just beneath the upper flanges of the carriages. Fig. 5 is a view similar to the right end of Fig. 2 with the stake omitted, the carriage having been adjusted farther inward along the I-beams than in Fig. 3. Figs. 6 and 7 are enlarged details showing the latching mechanism with the cam in two different positions as will be referred to hereinafter. Fig. 8 is a perspective detail of the latch. Fig. 9 is a perspective detail of one of the stakes and of so much of the other parts as it engages when it is locked in substantially upright position.

In the drawings the numeral 1 designates part of the platform of a car or other vehicle such as is used for transporting logs, poles, lumber and possibly other freight of

similar shape, although this invention is especially applicable to articles which are cylindrical in contour and rather long and which by their shape are therefore likely to roll off the vehicle. If the load should consist, for instance, of three rather large logs as shown in dotted lines in Fig. 2, it may be easily held on the vehicle by the use of chock blocks properly disposed, and as an element of safety it may be additionally held by means of two stakes although the latter are ordinarily used for holding a larger load of articles of rather smaller size. When it is desired to dump the larger logs, it is usually necessary only to remove the chock blocks or stakes or both, and either permit the logs to roll off or to stop them by means of a crow bar. Once started, the load goes with a rush, and operators at that side of the car have not time to escape and therefore are frequently injured or killed. One object of the present invention is to render it impossible for an operator to release the chock block or stake on that side of the car nearest to him, and therefore no matter how careless or forgetful he may be it is impossible for him to unload a log toward himself. This object would be carried out by disposing one of my improved bunks at the midlength of a rather long platform car to engage the center of long logs loaded thereon, leaving their extremities to be chocked by other ordinary means; but when a platform car is provided with this device, there are usually two of them put in place as indicated in Fig. 1, although as they are duplicates of each other I need describe but one.

Upon the sills of the platform 1 bed plates 2 are secured by clips 3 or otherwise, and across each pair of said plates is disposed a pair of spaced I-beams 4 whose lower outer flanges are secured to the bed plates by screws or rivets 5 as shown. At suitable points throughout their length these beams 4 may also be connected by transverse straps or plates 6 passing beneath them and secured to their lower flanges as shown in Figs. 2 and 4; and they are further held in spaced relation to each other by means of a plate 7 extending over their upper flanges and bolted thereto as at 8, this plate being of some considerable length as shown in Fig. 2 and having upstanding flanges 9 along its edges so as to slightly indent the log or logs laid thereon

as indicated in dotted lines and prevent the same from moving longitudinally upon the car body. The parallel spaced I-beams 4 are thus rigidly mounted across the sills of a car or other vehicle, their upper flanges and the flanges 9 of the plates 7 constitute supports for the load, and the space between the beams constitutes a runway or track for the carriage next to be described. There are two such carriages for each runway, one disposed at each end of the latter, and each carriage is made up of a pair of I-beams 10 all dimensions of which are smaller than those of the I-beams 4, the webs of said beams 10 being spaced by blocks 11 through which pass fastening bolts 12 as best seen in Fig. 4. Outside the web of one beam (for instance, the right-hand one of the pair) is disposed an L-shaped plate 13 having a rack bar 14 on its outwardly extending flange, and engaging this rack bar is the lip 15 at one extremity of a U-shaped latch 16 whose body lies outside the web of the adjacent beam 4 and whose opposite extremity 17 is inturned through said web and headed up as at 18 to form a pivot. The arm 19 carrying the lip 15 moves in a slot 20' cut on an arc around the pivotal end 17 of this latch through the web of the beam 4 as best seen in Figs. 6 and 7, and the lip 15 depends from the inner end of the arm 19 and is adapted to engage the notches in the rack bar 14 in a manner which will be clear. The means for actuating this latch consist of a push bar or rod 20 slidably mounted behind the bolts 8 above described and behind the screws or bolts 5 by which the beam 4 is attached to one of the plates 2, and the handle 21 of the rod stands at the remote end of the track or runway from the position occupied by the carriage being described, for a purpose which will appear below. The inner end of the rod is formed into a hook whose shank has a cam 23 underlying the movable arm 19 of the latch and whose bill forms a guard 24 overlying said arm as best seen in Figs. 6 and 7. From this construction it is obvious that when the rod is manipulated by its handle 21 the cam 23 may be forced under said arm 19 to raise the latch to the position shown in Fig. 7 so that its lip 15 disengages the rack bar 14, but when the rod is moved in the opposite direction the arm rides down the cam and the guard 24 moves over the arm so that the lip reengages the rack bar 14 and the guard prevents it from accidental disengagement therewith. As seen in Fig. 4, the carriage at each end of the track or runway is locked and unlocked by a latch controlled by a rod whose handle stands at the opposite side of the car, the purpose of which will be explained below.

At the outer extremities of both I-beams

10 all their inner flanges are cut away as shown at 30, and between their webs on a bolt 31 is pivoted a chock block 32 whose thickness is such that it may move freely between the inner edges of the flanges of the I-beams 4. When idle this block hangs as seen in Fig. 3, and through its body passes a pin 33 whose extremities rest on the inner flanges of the main beams 4 when the chock block is raised as seen in Fig. 2 and may even slide inward thereon to a considerable extent when the carriage must be adjusted inward as seen in Fig. 5 to bring the chock block under a somewhat smaller load. A pin 34 is properly disposed through the webs of the two beams 10 to prevent this block from rising higher than shown in Figs. 2 and 5, and as its center of gravity is therefore always outside of its pivotal bolt 31 it follows that when the carriage is moved outward and the pin 33 passes off the extremities of the flanges of the main beams 4 the chock block will fall and the pin will pass around the ends of said beams to the position shown in Fig. 3. The device as thus far constructed is quite useful for supporting a load of logs or rather large cylindrical articles upon the bunk in such manner that they cannot roll off of the same. They are obviously disposed as indicated by the dotted lines in Fig. 2, the carriages being moved inward sufficiently to cause the chock blocks to rest beneath the outermost logs in a manner which will be clear. When now it is desired to dump the load the chock block at one side of the car must be permitted to assume the position shown in Fig. 3; and, as explained above, the carriage can only be unlatched to permit the freeing of this chock block by an operator who must of necessity stand at the opposite side of the car and is therefore free from danger of injury by the falling logs.

In connection with the improvements above described I use a stake of peculiar construction in order that it will cooperate with the chock block and the mechanism for locking and unlocking the same. The upper end of body of this stake 40, may be of any height and construction, but by preference it is composed of two pieces of strap iron riveted together as shown at 41, and at their lower ends they diverge into a loop 42 beneath which the irons are integrally connected in a bail 43 which may be and by preference is flexibly connected with the platform or sill 1 by means of a chain 44 so that the stake may not be lost. The loop is of sufficient width to span the web of the two main beams 4, it is provided with a cross bar 45 adapted to rest against the ends of said webs, beneath this bar the inner edges of the sides of said loop rest against the outer flanges of said beams, and the

upper outer flanges are cut away or notched as at 46 so that the entire stake may occupy an oblique position as best seen in Fig. 2. By preference the inner edges of the side bars of the loop are themselves notched as seen at 47 so that when each stake occupies this position there is an interengagement of notches as best seen in Fig. 9, and if the notches 47 are employed their engagement with the extremities of the outer flanges of the main beams 4 will prevent the stake from moving upward or downward or inward at this point, and the fact that the body of the loop surrounds the webs of said main beams will prevent it from moving transversely thereon. In order now to prevent the lower end of the stake from being moved outward, I provide the side bars of said loop with downwardly projecting hooks 49 engaging eyes 50 in the outer lower flanges of said main beams; and as the stake cannot rise for the reason just described, the hooks cannot disengage the eyes. Finally, in order to prevent the upper ends of the hooks from moving outward, I provide each loop with a deflected cross bar which is in effect an eye 51 properly disposed to be engaged by a hook 52 in the chock block 32 when the latter is elevated as seen in Fig. 2. Thus it will be seen that a stake of this specific construction is particularly applicable to a chock block of the construction described, especially when the latter is controlled by a carriage which is locked and unlocked as has been set forth.

Assuming that the stake is locked in upright position as shown at the left of Fig. 2. When it is desired to release the load whether the same be logs as indicated or smaller articles, an operator (who of necessity must be at the opposite side of the car) pushes inward on the handle 22 whereby the cam 23 is forced beneath the arm 19 of the latch 16 and the lip 15 thereof is raised out of engagement with the rack bar 14. This frees the carriage which is at liberty to move outward or to the left in Fig. 2 and to the position shown in Fig. 3, and with it moves the chock block 32. The pin 33 on the latter slides along the upper flanges of the main beams 4 until it clears their outer corners and may fall over the same as described, and meanwhile the hook 52 carries the eye 51 along with it and swings the stake outward so that the notches 47 and 46 disengage each other, and the hooks 49 are disengaged from the eyes 50 and the stake is disconnected from the main beam just at the time that the chock block commences to swing downward around its pivot 31. As it falls to the position shown in Fig. 3 its hook 52 disengages the eye 51 completely, and the entire stake falls out of the way and is retained merely by the chain 44. Thus the chock block and stake are simul-

taneously and automatically removed from beneath the log near that end of the bunk, and the log rolls off on the ground without the possibility that it may injure the workman who must have actuated the latch from the opposite side of the car. In this position of parts the chock block is entirely out of the way and the stake either hangs pendent by the chain 44 or is entirely removed, and the result is that the car may be used for other purposes.

When now it is desired to again load a car provided with this invention, the parts are set up to the position shown in Fig. 2 and the load must be passed over the upper ends of the stakes. The latter, however, are locked against movement in all directions in the manner described above, and if in the act of loading some of the load should strike the stakes they will not be dislodged from their position. If it should so happen that the load is smaller than the width of the car or the length of the main beams 4, the stakes will be disengaged from the hooks 42 and the carriages moved inward as shown in Fig. 5 so that the chock blocks alone support the load in a manner which will be clear.

I do not wish to be confined to the specific details of construction, as it is to be understood that this specification is merely descriptive of one embodiment of my idea and that changes in detail may be made within the spirit of the invention.

What is claimed as new is:

1. The herein described bunk for logging vehicles comprising a pair of I-beams disposed in spaced relation to each other, plates secured to the lower flanges of said beams near the extremities of the latter, chock blocks movably mounted in the spaces between said beams above such plates, means for locking said blocks, rods for tripping the locking mechanism, said rods extending along the outside of the webs of said beams, a bunk plate overlying the upper flanges of said beams and having upstanding flanges along its edges, and bolts passing through this plate and downward through the outer flanges of said beams and outside said rods.

2. In a bunk for logging vehicles, the combination with a pair of beams connected with each other so as to produce an internal runway, and a bunk plate mounted over said beams near their midlength; of a longitudinally movable carriage within said runway, a rack bar secured along the carriage, a chock block pivoted to the outer end of the carriage and its body movable in the space between said beams, a pin through said body for resting on the upper edges of said beams when the block is raised, and a latch adapted to engage said rack bar.

3. In a bunk for logging vehicles, the

combination with a pair of beams connected with each other so as to produce an internal runway, and a bunk plate mounted over said beams near their midlength; of a longitudinally movable carriage within said runway, a rack bar secured along the carriage, a chock block pivoted to the outer end of the carriage and movable in the space between said beams, a latch pivoted to one of said beams and having a lip at its free end adapted to be engaged with said rack bar, and a latch-operating rod leading along the beams.

4. In a bunk for logging vehicles, the combination with a pair of beams connected with each other so as to produce an internal runway; of a longitudinally movable carriage within said runway, a rack bar along the carriage, a chock block pivoted to the carriage and movable in the space between said beams, a pivoted latch having a lip at its free end adapted to be engaged with said rack bar, a latch-operating rod mounted in guides along one end of said beams and having a handle, and a cam on said rod adapted to coact with the movable end of said latch.

5. In a bunk for logging vehicles, the combination with a pair of beams connected with each other so as to produce an internal runway; of a longitudinally movable carriage within said runway, a rack bar along the carriage, a chock block carried by the carriage, a U-shaped latch whereof one extremity is pivoted to one of said beams and the other extremity passes through a slot in this beam and is provided with a lip adapted to engage said rack bar, and a latch-operating rod extending along one of said beams and having a hook whose throat is provided with a cam moving beneath the free end of said latch and whose bill is adapted to be moved over said free end, for the purpose set forth.

6. In a bunk for logging vehicles, the combination with a pair of spaced beams inclosing a substantially rectangular runway, the upright webs of said beams being provided with slots, and for each beam a U-shaped latch whereof one extremity is pivoted through said web and the other extremity forms an arm which extends through said slot and carries a deflected lip; of a longitudinally movable carriage within each end of said runway, a rack bar thereon adapted to be engaged by said lip, load-retaining devices connected with said carriage, and a latch operating rod extending from the latch along one beam, for the purpose set forth.

7. In a bunk for logging cars, the combination with a pair of main beams inclosing a substantially rectangular runway, the beams being spaced from each other at their extremities at top and bottom; of a longi-

tudinally movable carriage within each end of said runway and composed of two I-beams connected with each other and having their inner flanges cut away at their outer ends, a bolt through their webs, a chock-block pivotally mounted at its inner end on said bolt and adapted to move in the space between the extremities of the main beams, a pin connecting the webs of the carriage-beams and limiting the rise of said block, and a limiting pin through the outer end of the latter in position to rest upon the main beams when the block is raised into engagement with said stop.

8. In a logging bunk, the combination with two main beams secured in spaced relation to each other, a carriage movable longitudinally between them, and a chock block loosely connected at its inner end to said carriage and having a hook at its outer end; of a stake having a loop at the lower end of its body, a cross bar within the loop adapted to rest against the extremities of said beams, and an eye within the loop adapted to be engaged with said hook.

9. In a logging bunk, the combination with two main beams secured in spaced relation to each other, a carriage movable longitudinally between them, and a chock block loosely connected at its inner end to said carriage and having a hook at its outer end; of a stake having a loop at the lower end of its body, hooks depending from the sides of said loop, said beams having eyes with which the hooks are adapted to engage, and an eye within said loop adapted to be engaged by the hook of the chock block.

10. In a logging bunk, the combination with two main beams secured in spaced relation to each other, a carriage movable longitudinally between them, and a chock block loosely connected at its inner end to said carriage and having a hook at its outer end; of a stake having a loop in its body of a size to inclose the extremities of said main beams, a cross bar within said loop adapted to rest against said extremities, hooks on the side bars of said loop with their bills projecting downward, said beams having eyes with which said hooks are adapted to be engaged, and a deflected rod across said loop above the cross bar and constituting an eye with which the hook on the chock block is adapted to be engaged.

11. In a logging bunk, the combination with two I-beams secured in spaced relation to each other and each having its outer upper flange cut away at its extremity to produce a notch, a carriage movable longitudinally between them, and a chock block loosely connected at its inner end to said carriage and having a hook at its outer end; of a stake having a loop at its lower end whose side bars are adapted to rest against the extremities of the lower outer

flanges and in said notches of the upper
outer flanges, means for preventing the rise
of the stake, and an eye in the upper por-
tion of the loop engaged by the hook in the
5 chock block, for the purpose set forth.

12. In a logging bunk, the combination
with two I-beams secured in spaced relation
to each other and each having its outer
upper flange cut away at its extremity to
10 produce a notch, a carriage movable longi-
tudinally between them, and a chock block
pivoted to said carriage; of a stake having
a loop whose side bars are adapted to rest
against the extremities of the lower outer
15 flanges and in said notches of the upper
outer flanges and themselves have notches
engaging the latter flanges, and a hook-and-
eye connection between the upper portion of
the loop and the chock block, for the pur-
20 pose set forth.

13. In a logging bunk, the combination
with two I-beams secured in spaced relation
to each other and each having its outer
upper flange cut away at its extremity to

produce a notch, a carriage movable longi- 25
tudinally between them, and a chock block
pivoted to said carriage and having a hook;
of a stake having a loop whose side bars
are adapted to rest in said notches of the
upper outer flanges and themselves have 30
notches engaging such flanges, a cross bar
within the lower portion of the loop adapt-
ed to rest against the ends of the webs of
said main beams, down-turned hooks on the
side bars of said loop, the lower outer flanges 35
of said main beams being provided with
eyes engaged by these hooks, and an eye in
the upper portion of the loop engaged by
the hook in the chock block, for the purpose
set forth. 40

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

CLAYTON T. EAID.

Witnesses:

LUKE THORNTON,
MARY A. MACKINNON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."



DEFENDANTS EXHIBIT 4.

Cancellation of Contract.

Portland, Oregon March 27, 1913.

Whereas there was an agreement entered into on the 22d day of Dec., 1911, between C. T. Eaid party of the first part, and the Twohy Brothers Co., a corporaion organized under the laws of the State of Oregon, party of the second part, covering the manufacture of log bunks under letters patent issued to the party of the first part, and whereas there was a supplementary agreement entered into between the party of the first part and the party of the second part on the 28th day of March, 1912, and whereas it is mutually agreed between the party of the first part and the party of the second part to cancel said agreement and its supplement for a consideration, it is agreed that for the sum of two hundred and fifty dollars (\$250.00) in cash, receipt of which is hereby acknowledged, part of which sum is to be considered as payment in full by the party of the first part for such bunks as the party of the second part has manufactured and sold up to date under the letters patent held by the party of the first part and the balance is to be considered full and sufficient consideration to the party of the first part for the cancellation of said agreements, said agreements are hereby cancelled.

E. T. EAID

TWOHY BROS. CO.

By WARNICK C. WALDRON

Asst sec'y

Witness to both signatures

J. GREENE.

93

Defendants Exhibit 7.

DEFENDANT'S EXHIBIT 7.

C. D. MATHENY.
BUNK FOR LOGGING TRUCKS.

Patented Jan. 23, 1894.

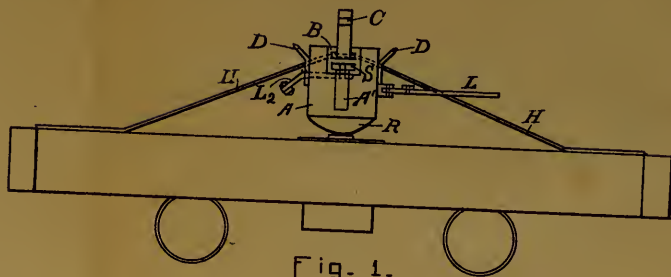


Fig. 1.

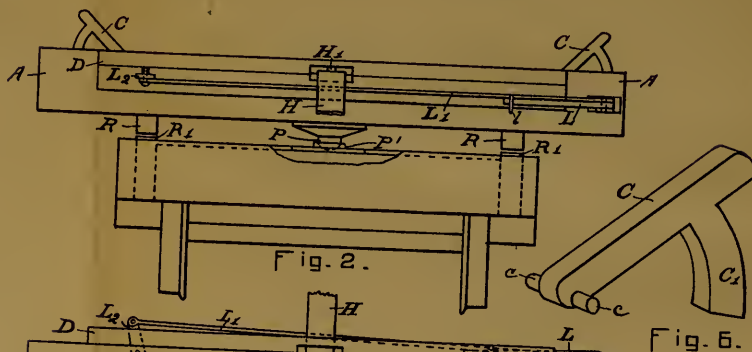


Fig. 2.

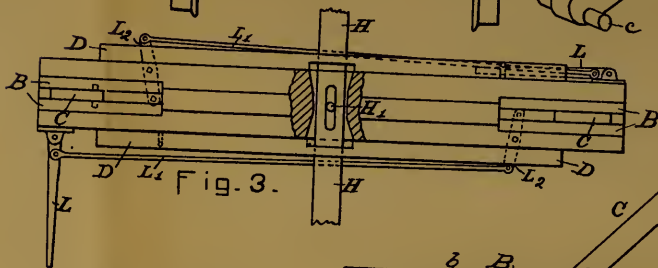


Fig. 3.

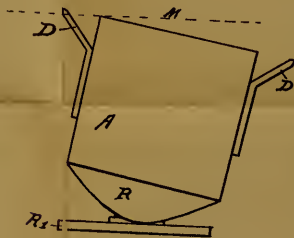


Fig. 5.

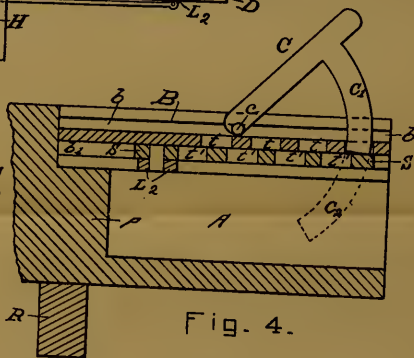


Fig. 4.

Witnesses.

Lee Wheeler
Len or James Richmond

Inventor,
C. D. Matheny.
by H. L. Reynolds,
his Atty.

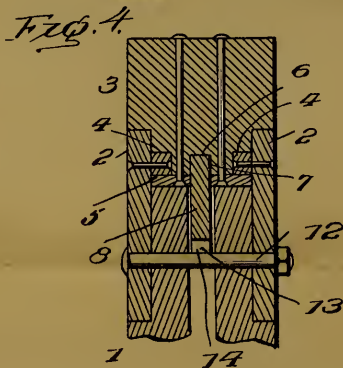
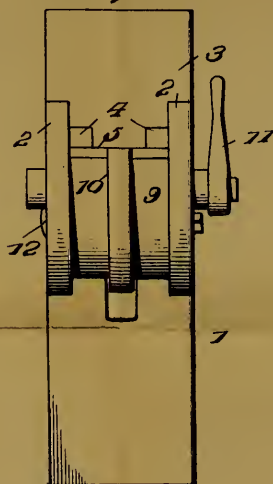
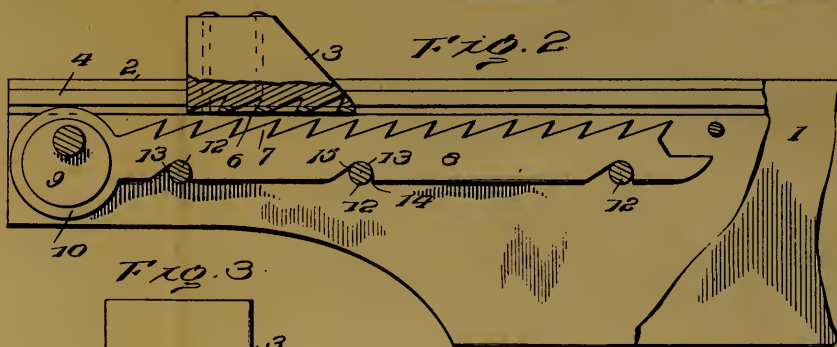
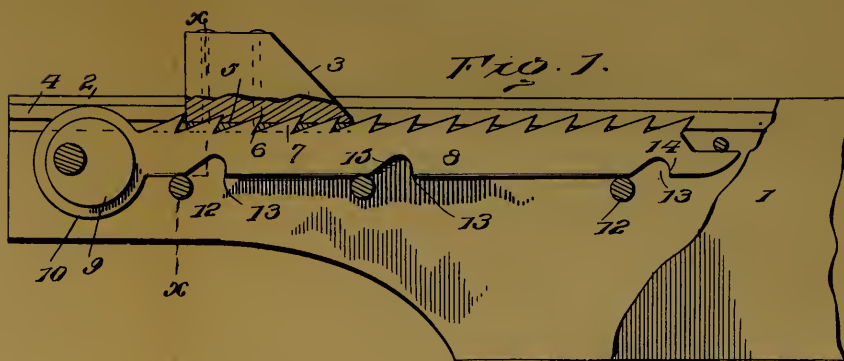
Defendants Ex Libet 8.

95-

DEFENDANT'S EXHIBIT 8.

T. D. PARSONS.
BOLSTER AND CHOCK FOR LUMBER TRUCKS.

APPLICATION FILED SEPT. 22, 1904.



Inventor

T. D. PARSONS

Witnesses

Wm. H. Woodson

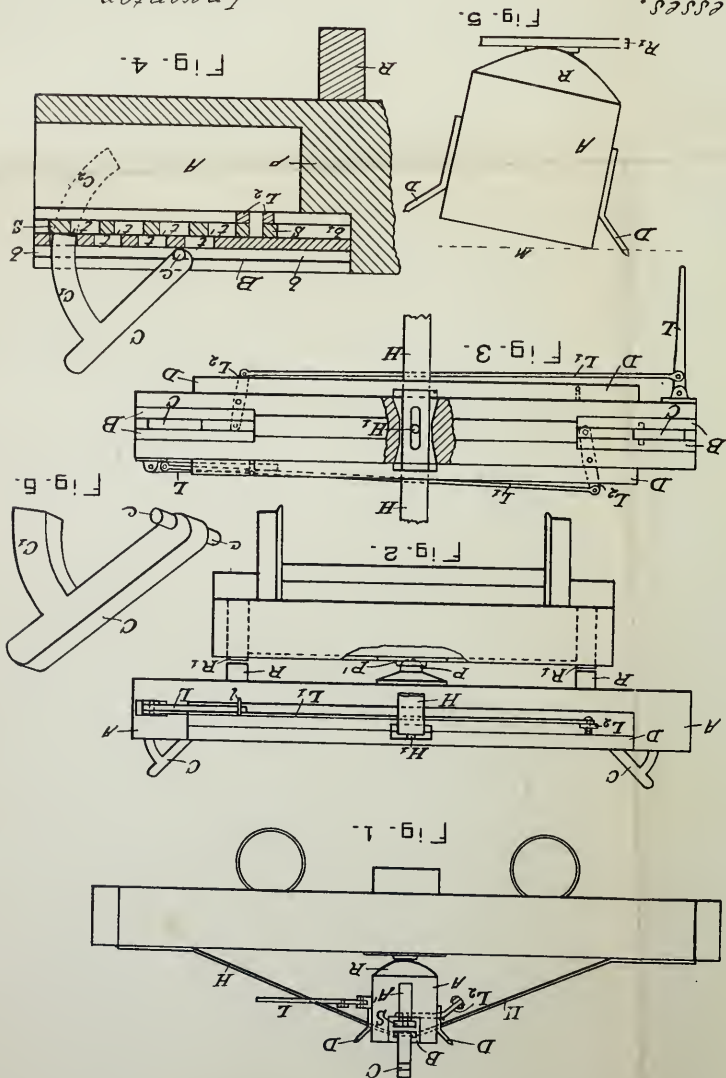
By

Wm. H. Woodson Attorney

(No Model)

No. 513,124.

C. D. MATHENY.
BUNK FOR LOGGING TRUCKS.
Patented Jan. 23, 1894.



Inventor
C. D. Matheny
by H. L. Reynolds
Att'y.

Witnesses.
Geo. Miller
Amos James Rickard

C. T. EAD.

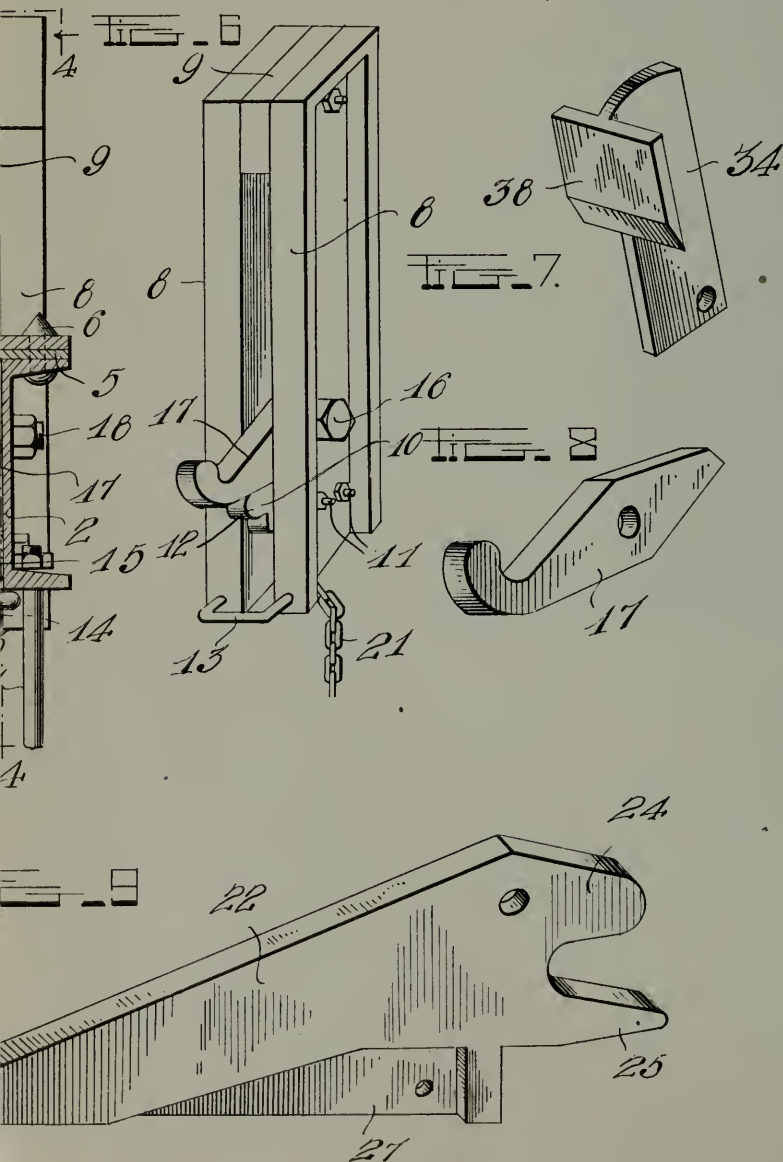
LOG BUNK AND STAKE FOR RAILWAY CARS.

APPLICATION FILED DEC. 29, 1910. RENEWED APR. 25, 1912.

Patented Jan. 21, 1913.

3 SHEETS—SHEET 3.

9.



UNITED STATES PATENT OFFICE.

THOMAS D. PARSONS, OF HATTIESBURG, MISSISSIPPI.

BOLSTER AND CHOCK FOR LUMBER-TRUCKS.

SPECIFICATION forming part of Letters Patent No. 700,915, dated May 30, 1905.

Application filed September 22, 1904. Serial No. 225,532.

To all whom it may concern:

Be it known that I, THOMAS D. PARSONS, a citizen of the United States, residing at Hattiesburg, in the county of Perry and State of Mississippi, have invented certain new and useful Improvements in Bolsters and Chocks for Lumber-Trucks, of which the following is a specification.

This invention relates to means for securing logs, lumber, and like material upon the bolsters of trucks or running-gear of cars or wagons used in the hauling of same.

The invention aims to provide for ready adjustment of the chock or load-retainer upon the bolster, the firm secureance of the same in the adjusted position, and its quick release when it is required to unload.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which

Figure 1 is a side view of an end portion of a bolster, showing the invention, parts being broken away. Fig. 2 is a view similar to Fig. 1, showing the toothed bar disengaged from the chock or load-retainer. Fig. 3 is an end view of the bolster and cooperating parts. Fig. 4 is a transverse section of the bolster on the line *x x* of Fig. 1.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The bolster 1 may be of metal or wood or a combination of materials such as commonly provided in wagons and cars for hauling logs, timber, and like material. It is to be understood that each end of the bolster is to be similarly equipped with a chock or load-retainer and cooperating parts embodying the invention. As illustrated, the bolster is constructed of wood and is reinforced by side plates 2, attached thereto in any substantial manner and

projecting above the top side of the bolster to provide ways for the chock or load-retainer 3. Longitudinal bars 4 are riveted or otherwise secured to the inner sides of the upper portions of the plates 2 to form guides and cooperate with a plate 5 for preventing vertical displacement of the chock or load-retainer 3.

The chock or load-retainer 3 may consist of a wooden block and is designed to prevent lateral displacement of the load in the manner well understood. The lower portion of the chock or load-retainer is rabbeted in opposite sides to fit between the upper edge portions of the plates 2 and between the bars 4, as indicated most clearly in Figs. 3 and 4. The plate 5, secured to the under side of the chock or load-retainer 3, underlaps the bars 4, thereby preventing vertical displacement of the chock and holding the same in place in any adjusted position. The plate 5 is provided upon a medial line with a series of openings 6 to receive the teeth 7 along the upper edge of a toothed bar 8, provided for securing the chock or load-retainer in the required adjusted position. The lower side of the chock is longitudinally grooved opposite to the openings 6 to admit the points of the teeth 7 projecting above the plate 5 when in positive engagement therewith.

The toothed bar 8 is arranged in a longitudinal groove formed in the upper edge portion of the bolster and is mounted to receive both a longitudinal and a vertical movement, and for convenience of imparting this combined movement to the toothed bar 8 an eccentric 9 is provided and journaled to an end portion of the plates 2, an eccentric-strap 10 at the outer end of the toothed bar encircling the eccentric in the accustomed manner. An operating lever or handle 11 is fitted to a journal of the eccentric 9 for rotation thereof when it is required to operate the toothed bar either to release the chock or to secure the same. A series of pins 12 support the toothed bar and have their end portions laid into the side plates 2. These pins 12 may consist of the bolts or fastenings employed for securing the side plates to the bolster. Depressions 13 corresponding in position and number to the pins 12 are formed in the lower edge of the

med on a spacing block
the beams of the bunks
by suitable fastening
d of the spacing blocks
e engaged by the lugs
blocks 10 of the stakes
engaged with the oppo-
k beams, said lugs and
a support for the stakes
ich are firmly bound to
s by the loops 13.

the beams of the stakes
ds are transversely dis-
ich are pivotally mount-
stake holding hooks 17
ich are adapted to pro-
between the outer ends
and into engagement
18 which are arranged
s shown in Fig. 4. On
beams of the bunks at
re secured stake bracing
a their outer ends lugs
e opposite sides of the
hold the same against
ovement. To one end of
the bunks is secured one
ing chain 21 the other
red to the stake thereby
from becoming lost or
nected or removed from
beams.

de for the engagement
ing hook 17 with the
a the ends of the bunk
the disengagement of
e bolts for the purpose
akes I provide a hook
which is pivotally con-
upper end with a sup-
nged through the bunk
he lever 22 is pivotally
e 23 between the beams
a the outer end of said
outwardly projecting
or nose 24 below which
e distance therefrom is
ing and supporting lug

the beams as shown. The inner ends of the
levers 22 and levers 29 are connected to-
gether by cables 31 to which are connected
operating cables 32 leading to the opposite
sides of the car. When the pull is exerted
on the cables 31 and 32 the free ends of
the levers 22 and 29 will be swung upwardly
thereby rocking the crank 28 of said lever
29 and swinging the end of the link 26
connected with said crank 28 downwardly
which will exert a downward and inward
pull on the outer end of the lever 22. When
the inner end of the lever 22 is thus swing
upwardly the supporting lug 25 thereof
will be swung downwardly and inwardly
thereby removing said lug from the path
of the hook of the member 17 and the hook
releasing nose or lug 24 of said lever 22 will
push the hook 17 down out of engagement
with the bolt 18, thereby releasing the stake
which will drop out of engagement with
the end of the bunk beams. The cables 31
which are connected to the inner ends of
the levers 22 and to levers 29 pass upwardly
over guide pulleys or sleeves 33 arranged
between the beams of the bunks adjacent to
and above the inner ends of the levers 22
as shown.

When it is desired to replace a stake at
either end of one of the bunk beams the loop
bolt 13 on the lower end of the stake is
engaged with the lug 14 on the spacing
block at the adjacent end of the beam and
the stake is swung inwardly whereupon the
supporting lug 12 of the spacing block 10
will engage the upper side of the block 15
in the beam. The cables 31 and 32 are
pulled to swing the inner end of the lever
22 upwardly and the lug 25 on the outer end
thereof downwardly or away from the bolt
18 to permit the inner end of the hook to
enter between the lug 25 and the bolt where-
upon when the cables 31 and 32 are released
the inner end of the lever 22 will drop by
gravity thus causing the lug 25 to force the
inner end of the hook up into engagement
with the pin 18 thereby securely fastening
the stake to the ends of the bunk beams.

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toothed bar 8 and coöperate with said pins to effect vertical movement of the toothed bar either to project the teeth 7 into engagement with the chock or load-retainer or to withdraw them from engagement therewith. The inner or rear edge 14 of each of the depressions 13 is abrupt to form a stop-shoulder to limit the outward movement of the toothed bar, whereas the outer edge 15 is inclined to form, in effect, a cam to ride upon the pins 12 and effect a gradual rising of the toothed bar simultaneously with its inward movement, whereby the teeth 7 are projected into engagement with the chock or load-retainer, so as to fix its position. When the toothed bar 8 is moved outward, it receives at the same time a corresponding downward movement by the riding of the inclined edges 15 upon the pins 12, thereby withdrawing the teeth 7 from engagement with the chock or load-retainer and permitting adjustment of the latter after the toothed bar has reached the limit of its outward and downward movement. The teeth 7 have an inward inclination toward their points, so as to interlock vertically with the plate 5 when in proper engagement therewith, thereby positively holding the parts 3 and 8 against casual vertical displacement. The teeth engage with the plate 5 by means of an upward and inward movement and are withdrawn by a similar outward and downward movement. The openings 6 are of corresponding shape to the teeth. By reason of the peculiar formation of the teeth and their matching openings outward stress upon the chock or load-retainer causes firmer engagement of the interlocking parts, as will be readily comprehended.

Having thus described the invention, what is claimed as new is—

1. In combination, a bolster, a chock or load-retainer adjustable longitudinally thereon, a toothed bar for securing the chock in the referred position, and means for imparting a simultaneous longitudinal and vertical movement to the toothed bar to effect engagement or disengagement of its teeth from said chock, substantially as specified.

2. In combination, a bolster, a chock or load-retainer adjustable longitudinally thereon, a toothed bar for securing the chock in an adjusted position, means for imparting longitudinal movement to the toothed bar, and pins and cam portions for imparting vertical movement to the toothed bar simultaneously with its longitudinal movement, substantially as specified.

3. In combination, a bolster, a chock ad-

justable upon the bolster, a plate secured to the chock and coöperating with the bolster to prevent vertical displacement of said chock, and a toothed bar adapted to coöperate with said plate to hold the chock in an adjusted position, substantially as specified.

4. In combination, a bolster, a chock adjustable thereon, a toothed bar coöperating with said chock to secure it in an adjusted position, and an eccentric for imparting a simultaneous longitudinal vertical movement to the toothed bar, substantially as set forth.

5. In combination, a bolster, a chock adjustable thereon, a toothed bar for securing the chock in an adjusted position, means for imparting a longitudinal movement to said toothed bar, and pins and cam portions for imparting vertical movement to the toothed bar simultaneously with its longitudinal movement, substantially as set forth.

6. In combination, a bolster, a chock adjustable thereon, a toothed bar for securing the chock in an adjusted position and having depressions or cut-away portions with one edge inclined, pins for supporting the toothed bar and adapted to coöperate with the inclined edges of the cut-away portions to effect positive movement of the toothed bar, and operating means for the latter substantially as specified.

7. In combination, a bolster, plates having portions projected above said bolster and having inner longitudinal extensions, a chock adjustable on the bolster, a plate secured to the under side of the chock and underlapping said inner longitudinal extensions, and a toothed bar for securing the chock in an adjusted position, substantially as specified.

8. In combination, a bolster, plates secured to the sides of the bolster and having edge portions projected upward therefrom, bars at the inner sides of said plates, a chock adjustable upon the bolster, a plate secured to the chock and underlapping said bars to prevent casual displacement of the chock, a toothed bar adapted to receive a longitudinal and a vertical movement for securing the chock in an adjusted position, and an eccentric journaled to the aforesaid plates and adapted to impart movement to the toothed bar, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS D. PARSONS. [L. s.]

Witnesses:

J. F. PHILLIPS,
R. T. STAPLETON

being formed on their
 ing lugs, log holding
 opposite ends of said
 gs arranged on the
 ukes and adapted to
 ums of the bunks and
 the stake supporting
 stake holding bolts
 nds of the stakes and
 with the lugs on the
 acing blocks of said
 lts arranged through
 e beams, stake hold-
 nected to the stakes
 rted between the op-
 us and into operative
 bolts whereby the
 eld in position, and
 ooks and thereby dis-
 the ends of the beams.
 rs comprising pairs
 d beams, said beams
 in spaced relation,
 nged on the opposite
 id stakes comprising
 gether in spaced rela-
 and finishing plates
 r ends of said bars,
 pport and fasten the
 s to the outer ends of
 hing bolts arranged
 ends of the beams,
 pivoted to said stakes
 gged with the fasten-
 g of the beams, hook
 g levers pivotally
 beams, hook guiding
 rmed on the outer
 adapted to engage the
 and to hold the lat-
 ment with their fas-
 etaching lugs also
 ds of said levers and

adapted to disengage the hooks from their
 bolts when said levers are operated, cranked 45
 locking levers pivotally mounted on the un-
 der side of said beams, links to connect said
 cranks with said hook holding and releasing
 levers whereby the latter are locked in oper-
 ative position to hold said hooks in engage- 50
 ment with the bolts, operating cables con-
 nected to the ends of said levers whereby the
 latter are simultaneously operated from the
 opposite side of the car to release said hooks
 and thereby detach said stakes, and chock 55
 blocks having an adjustable and pivotal con-
 nection with said beams to hold the logs in
 position thereon.

6. A log bunk for cars comprising pairs
 of transversely disposed beams secured to- 60
 gether "in spaced relation, means to secure
 said beams to the car, longitudinally slotted
 connecting plates secured to the upper edges
 of said beams, log holding stakes arranged on
 the opposite ends thereof, means to detach- 65
 ably secure said stakes in place whereby the
 logs may be released from the opposite side
 of the car, supporting bolts adjustably ar-
 ranged in said beams, chock blocks pivotally
 mounted on said bolts and adapted to pro- 70
 ject up through the slotted connecting plate
 of the beams, flanges formed on the inner
 edges of the upwardly projecting portions of
 said blocks and operating cables connected
 to the lower ends of the blocks whereby each 75
 of said blocks is swung upwardly from the
 opposite side of the car and held in oper-
 ative position above the beams.

In testimony whereof I have hereunto set
 my hand in presence of two subscribing wit- 80
 nesses.

CLAYTON T. EAID.

Witnesses:

J. A. HOSBOR,

R. E. MASON.

97
Defendants Exhibit 9.

89 71
97

DEFENDANT'S EXHIBIT 9.

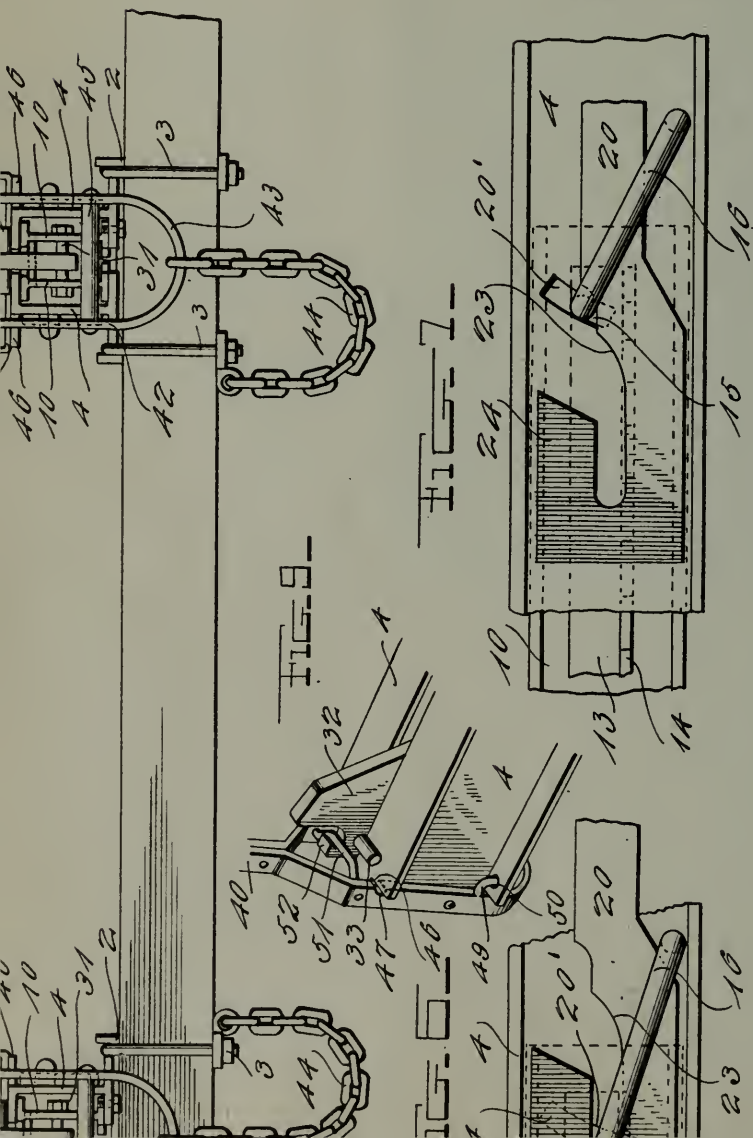
C. T. EAID.

LOGGING CAR BUNK AND STAKE.

APPLICATION FILED FEB. 12, 1912.

Patented Mar. 4, 1913.

2 SHEETS—SHEET 1.



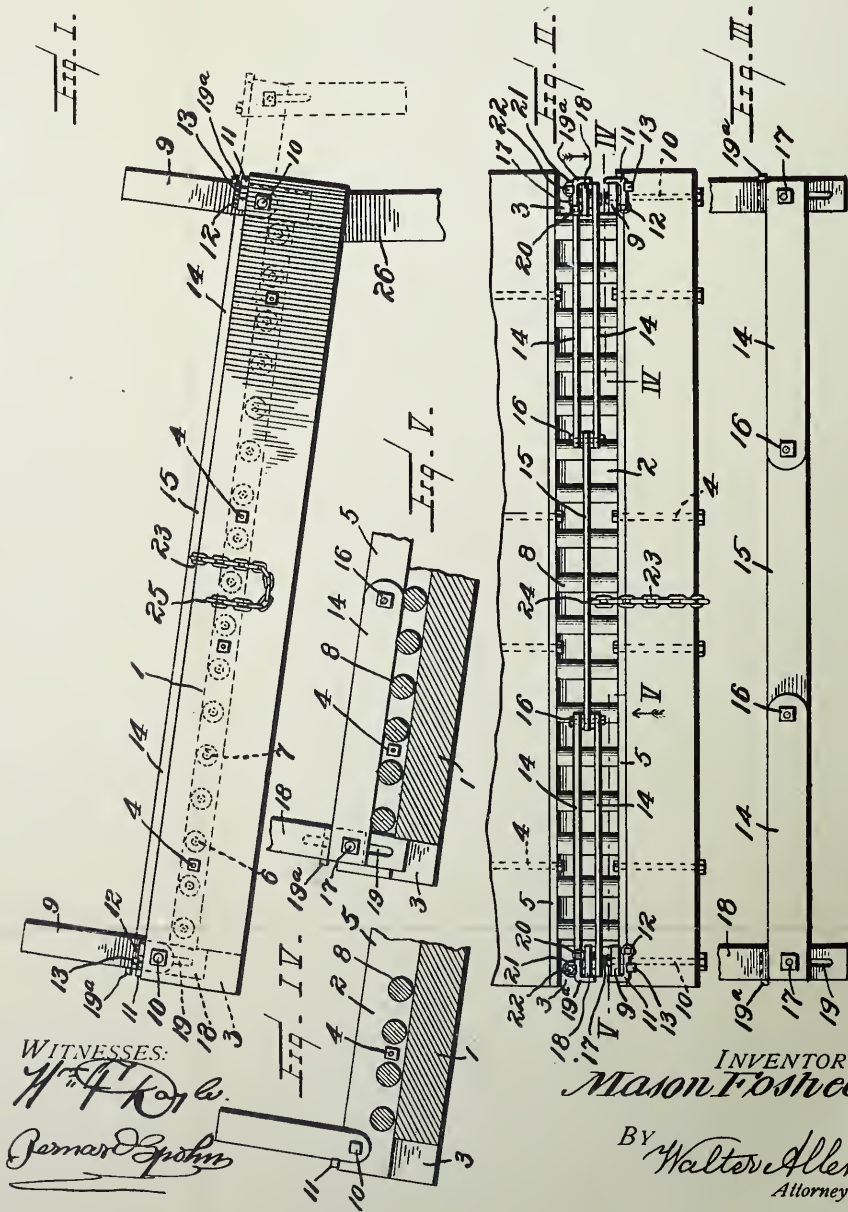
No. 770,899.

PATENTED SEPT. 27, 1904.

M. FOSHEE.
BOLSTER FOR DUMPING CARS.
APPLICATION FILED JULY 5, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



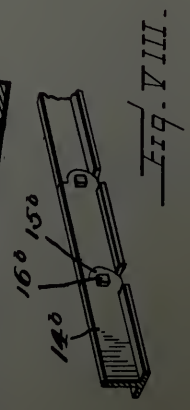
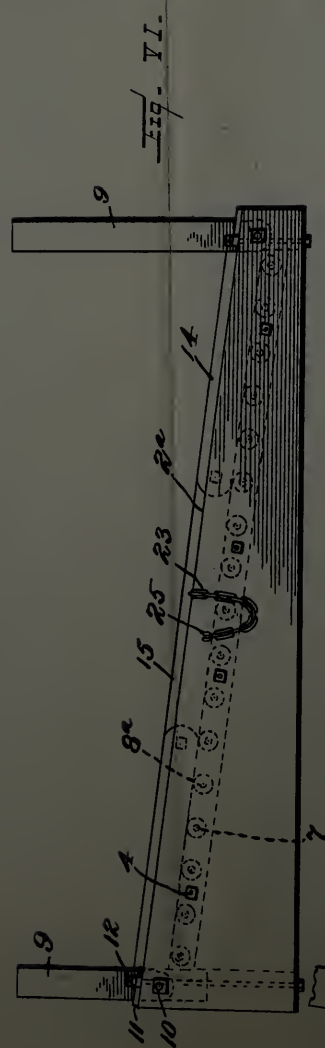
No. 770,899.

PATENTED SEPT. 27, 1904.

M. FOSHEE.
BOLSTER FOR DUMPING CARS.
APPLICATION FILED JULY 5, 1904.

NO MODEL.

2 SHEETS—SHEET 2.



WITNESSES:
W. F. Kyle.
Samuel Spohn

INVENTOR
Mason Foshee,
By H. W. Allen

UNITED STATES PATENT OFFICE.

MASON FOSHEE, OF CHAPMAN, ALABAMA.

BOLSTER FOR DUMPING-CARS.

SPECIFICATION forming part of Letters Patent No. 770,899, dated September 27, 1904.

Application filed July 5, 1904. Serial No. 215,255. (No model.)

To all whom it may concern:

Be it known that I, MASON FOSHEE, a citizen of the United States of America, and a resident of Chapman, in the county of Butler and State of Alabama, have invented certain new and useful Improvements in Bolsters for Dumping-Cars, of which the following is a specification.

My invention is an improvement in those bolsters for dumping-cars which are provided with means for retaining, releasing, and dumping a load.

One object of my invention is to provide a bolster with improved means for retaining the load while being transferred.

Another object of my invention is to provide a bolster with improved means for facilitating the dumping of the load at either side of the car.

Another object of my invention is to provide a bolster with improved means whereby the load is readily carried to either side of the car.

Another object of my invention is to provide a bolster with an improved carrying means in the form of a dumping-carriage of peculiar construction.

Another object of my invention is to provide a bolster with a carrying means in the form of a dumping-carriage and means for holding and releasing the dumping-carriage.

Another object of my invention is to provide means for limiting the movement of the carrying means.

Another object of my invention is to provide improved means for releasing the shiftable hooks, whereby the bolster-stakes are held in normal position.

With these and other objects in view to improve the construction of such bolsters my invention consists in the novel combination of devices and features of construction herein-after fully described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved bolster for dumping-cars tilted to its operative position, having a carrying means in the

form of a carriage, the outer carriage-stake being shown in dotted lines in released position. Fig. II is a top plan view thereof, the outer carriage-stake being in normal position. Fig. III is a side elevation of my carrying means in the form of a carriage. Fig. IV is a detail longitudinal section of the bolster, taken on the line IV IV of Fig. II, looking in the direction of the arrow. Fig. V is a detail longitudinal section of the bolster, taken on the line V V of Fig. II, looking in the direction of the arrow. Fig. VI is a side elevation of my improved bolster having a longitudinal trough, series of rollers, and carrying means inclined toward the dumping end of the bolster. Fig. VII is a longitudinal section of my bolster in which the carrying means is in the form of an endless chain. Fig. VIII is a perspective view of a section of my preferred form of chain, consisting of rail-sections having rule-joints. Fig. IX is a top plan view of one end of my bolster, showing my means for releasing the hooks of the bolster-stakes.

1 is the bolster of a flat or skeleton logging-car constructed with a longitudinal trough 2 extending its whole length and with recesses 3 in the ends of the bolster beneath the trough. Fitted against and secured to the walls of the trough by means of bolts 4 are a pair of oppositely-disposed binding-plates 5, each having a series of holes or orifices 6, Fig. IX, which receive the journals 7 of a series of conveyer-rollers 8, preferably made of metal.

9 represents bolster stakes or stanchions located one at each end of the bolster and having their lower ends pivoted in the trough over the recesses 3 by means of bolts 10. These bolster-stakes are prevented from moving inward by the load which is placed between them, and they are normally supported in upright position against outward movement by means of horizontally-arranged hooks 11, pivoted upon the top of the bolster by vertical bolts 12. The hooks 11 are held in place and from accidentally leaving the bolster-stakes (due to the vibration of the car) by means of headed retaining pins or spikes 13, inserted in the top of the bolster, so as to be readily removed for dumping the load.

The bolster-stakes are provided for the usual purpose of sustaining the load from sidewise movement. As a means for supporting and facilitating the dumping of the load I provide a carrying means adapted to support the load upon the conveyer-rollers and to travel or run freely with the load upon the conveyer-rollers to either side of the car when the load is released. As shown in Figs. I, II, III, and VI, the carrying means is in the form of a carriage consisting of two pairs of parallel outer bars 14 and an intermediate bar 15. The inner ends of the outer bars 14 are hinged to the ends of the intermediate bar 15 by means of bolts 16. These bars are preferably formed of iron or steel plates one and one-fourth by two and one-half inches in dimensions and set up edgewise on the conveyer-rollers. Extending across the outer ends of the outer bars 14 are pivot-bolts 17, and on these pivot-bolts between the outer ends of the outer bars, I mount carriage stakes or stanchions 18, having bolt-openings in the form of slots 19, so as to enable these carriage-stakes to be turned or raised or lowered on their pivot-bolts. These carriage-stakes are so positioned with relation to the conveyer-rollers 8 and bolster that they are normally held in upright position, with their lower ends in engagement with or lapping the ends of the bolster within the recesses 3, so as to hold the load and carrying means from shifting toward the ends of the bolster until the carriage-stakes 18 are raised from the recesses 3 to a position above the rollers 8 and to enable the carriage-stakes to pass over the conveyer-rollers 8 with the load either toward one end or the other end of the bolster.

Mounted upon the outer end of one of each pair of the outer bars 14 of the carriage are horizontally-arranged hooks 19^a, pivoted by bolts 20 to the bars and engaging the carriage-stakes, so as to hold them in their normal upright position against the load, and thus preventing them from falling outward when raised until it is desired to release them. These bars 14 are also provided with laterally-extending eye-brackets 21, in which are inserted removable headed pins or spikes 22 for holding the hooks 19 from accidentally leaving the carriage-stakes.

23 is a chain for limiting the movement of the carrying means, secured at one end to an eye 24 upon the side of the carrying means and at the other end to an eye 25 upon the side of the bolster.

26 is a bumper for supporting the ends of the bolsters from which the load is to be dumped.

Instead of tilting the car, as indicated by the inclined position of the bolster shown in Figs. I, IV, V, and VII, for the purpose of throwing the weight of the load to one side I may provide the bolster with an inclined trough 2^a and a correspondingly-inclined series of conveyer-rollers 8^a and conveying

means mounted upon the rollers, as shown in Fig. VI. In Fig. VII, I show another form of carrying means, in which I substitute for the carriage a continuous chain of short paired parallel bars 14^a and intermediate bars 15^a, connected by bolts 16^a and adapted to travel or run on a series of rollers 8^b and around end rollers 8^c. The chain may be constructed of sections of L-rails 14^b, having rule-joints 15^b, connected by bolts 16^b, as shown in Fig. VIII. This form of chain provides a broad base for the carrying means.

Referring to Fig. IX, I show the means which I have provided for releasing the hooks 19^a from the bolster-stakes 9 after their retaining-pins 13 have been removed. 27 is a sliding plate having a slot 28, receiving the upper end of a pivot-bolt 29, whereby it is mounted over the end recess 3 of the bolster. This sliding plate is located in such a position with relation to the bolster-stake as to impinge against the end of the hook 19^a. Located upon the top of the bolster, at the opposite side to the bolster-stake, is a sliding wedge 30, having a slot 31, through which is inserted a headed pin 32, whereby it is secured to the bolster. 33 is another headed pin or bolt, inserted in the bolster and located adjacent to the heel of the sliding plate 27, and between the latter and the pin 33 the point of the sliding wedge is positioned so that when the latter is driven outward by a suitable tool in the hands of an operator the sliding plate 27 will be forced toward the hook 19^a and release it, when the bolster-stake will fall outward and turn the sliding plate 27 on its pivot-bolt 29 out of the way, thus permitting the stake to drop out of the way of the load to be dumped.

A car provided with my improved bolsters and the carrying means and loaded with logs or timbers is brought to the dumping-ground or pond, where the railway-track is elevated and the inner side of the track is built higher than the side next to the dumping-ground or pond. The bolsters are therefore in the inclined position. (Shown in Figs. I, II, and III.) To dump the load, the means for holding the outer bolster-stakes are released and the bolster-stakes fall outward, the load being sustained by the carriage-stakes, which are in their lowest position. The operator next goes to the inner side of the car and strikes the carriage-stakes on that side of the car upward to disengage their lowest ends from the bolsters, so as to release the carrying means and enable the carriage-stakes farthest from the dumping side to pass over the rollers. The load being released, the carrying means and its load of logs travel upon the rollers and the load is immediately dumped onto the dumping-ground or into the pond. The car is prevented from tipping or turning over at the dumping side by bringing it to such a position as to permit the outer ends of the bolsters to be supported upon the bumper 26.

It will be clearly understood that in carrying my invention into practical use two or more of these bolsters are employed with a car which may be either a skeleton, flat, or other car. In some instances I may dispense with the bolster-stakes, relying upon the stakes of the carrying means for retaining the load; but for additional security in transporting the loads I prefer to employ the bolster-stakes for additional strength. In like manner the carriage-stakes may be dispensed with and the bolster-stakes relied upon to secure the loads.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A bolster for a dumping-car constructed with a longitudinal trough, a series of conveyer-rollers journaled in the walls of the trough, and stakes secured to the bolster at the ends of the trough.

2. A bolster for a dumping-car constructed with a longitudinal trough, binding-plates fitted in the trough and secured to the walls thereof, a series of conveyer-rollers journaled in the binding-plates, and stakes secured to the bolster at the ends of the trough.

3. A bolster for a dumping-car constructed with a longitudinal trough, a series of conveyer-rollers journaled in the walls of the trough, carrying means adapted to travel upon the conveyer-rollers, and stakes secured to the bolster at the ends of the trough.

4. A bolster for a dumping-car constructed with a longitudinal trough, a series of conveyer-rollers, journaled in the walls of the trough, carrying means adapted to travel upon the conveyer-rollers, a chain for limiting the movement of the carrying means connected with the carrying means and with the bolster and stakes secured to the bolster at the ends of the trough.

5. A bolster for a dumping-car constructed with a longitudinal trough, a series of conveyer-rollers journaled in the walls of the trough, stakes pivoted to the bolster, at the ends of the trough, and shiftable means for holding the stakes in their normal position.

6. A bolster for a dumping-car constructed with a longitudinal trough, binding-plates fitted in the trough and secured to the walls thereof, a series of conveyer-rollers journaled in the binding-plates, stakes pivoted to the bolster at the ends of the trough, and shiftable means for holding the stakes in their normal position.

7. A bolster for a dumping-car constructed with a longitudinal trough, recesses in the ends of the bolster, a series of conveyer-rollers, journaled in the walls of the trough, stakes pivoted to the bolster at the ends of the trough above the recesses, and shiftable means for holding the stakes in their normal position.

8. A bolster for a dumping-car constructed with a longitudinal trough, recesses in the ends

of the bolster, binding-plates fitted in the trough and secured to the walls thereof, a series of conveyer-rollers, journaled in the binding-plates, stakes pivoted to the bolster at the ends of the trough above the recesses, and shiftable means for holding the stakes in their normal position.

9. A bolster for a dumping-car constructed with a longitudinal trough, a series of conveyer-rollers journaled in the walls of the trough, carrying means, adapted to travel upon the conveyer-rollers, stakes pivoted to the bolster, at the ends of the trough, and shiftable means for holding the stakes in their normal position.

10. A bolster for a dumping-car constructed with a longitudinal trough, binding-plates fitted in the trough and secured to the walls thereof, a series of conveyer-rollers journaled in the binding-plates, carrying means adapted to travel upon the conveyer-rollers, stakes pivoted to the bolster at the ends of the trough, and shiftable means for holding the stakes in their normal position.

11. A bolster for a dumping-car constructed with a longitudinal trough, recesses in the ends of the bolster, a series of conveyer-rollers, journaled in the walls of the trough, carrying means, adapted to travel upon the conveyer-rollers, stakes, pivoted to the bolster at the ends of the trough above the recesses, and shiftable means for holding the stakes in their normal position.

12. A bolster for a dumping-car constructed with a longitudinal trough, recesses in the ends of the bolster beneath the trough, binding-plates fitted in the trough and secured to the walls thereof, a series of conveyer-rollers, journaled in the binding-plates, carrying means, adapted to travel upon the conveyer-rollers, stakes pivoted to the bolster at the ends of the trough above the recesses, and shiftable means for holding the stakes in their normal position.

13. A bolster for a dumping-car constructed with a longitudinal trough, a series of conveyer-rollers journaled in the walls of the trough, carrying means consisting of bars hinged together and adapted to travel upon the conveyer-rollers, stakes pivoted to the bolster, at the ends of the trough, and shiftable means for holding the stakes in their normal position.

14. A bolster for a dumping-car constructed with a longitudinal trough, binding-plates fitted in the trough and secured to the walls thereof, a series of conveyer-rollers journaled in the binding-plates, carrying means consisting of bars hinged together and adapted to travel upon the conveyer-rollers, stakes pivoted to the bolster at the ends of the trough, and shiftable means for holding the stakes in their normal position.

15. A bolster for a dumping-car constructed with a longitudinal trough, recesses in the ends

DEFENDANTS EXHIBIT 4.

Cancellation of Contract.

Portland, Oregon March 27, 1913.

Whereas there was an agreement entered into on the 22d day of Dec., 1911, between C. T. Eaid party of the first part, and the Twohy Brothers Co., a corportaion organized under the laws of the State of Oregon, party of the second part, covering the manufacture of log bunks under letters patent issued to the party of the first part, and whereas there was a supplementary agreement entered into between the party of the first part and the party of the second part on the 28th day of March, 1912, and whereas it is mutually agreed between the party of the first part and the party of the second part to cancel said agreement and its supplement for a consideration, it is agreed that for the sum of two hundred and fifty dollars (\$250.00) in cash, receipt of which is hereby acknowledged, part of which sum is to be considered as payment in full by the party of the first part for such bunks as the party of the second part has manufactured and sold up to date under the letters patent held by the party of the first part and the balance is to be considered full and sufficient consideration to the party of the first part for the cancellation of said agreements, said agreements are hereby cancelled.

E. T. EAID

TWOHY BROS. CO.

By WARNICK C. WALDRON

Asst sec'y

Witness to both signatures

J. GREENE.

ing blocks, links pivoted to the beam and connected to each other to be operated simultaneously for elevating the serrated bar, and adjustable block carried thereby, substantially
5 as shown, and for the purpose set forth.

2. In combination with the beam A, guide-strips B B' B', vertical moving bars held by said guide-strips and provided with suitable sliding blocks, D D, links E, pivotally secured
10 to the beam A and to connecting-bars F, and the trip-rods G, pivotally secured to the ends of the bars H, the parts being organized substantially as shown, and for the purpose set forth.

3. In combination with a beam, A, a vertically-movable serrated bar carrying sliding
15 blocks D, links E, having the upper portions thereof bifurcated and one of the sides recessed, a connecting-bar pivotally secured to

said links, and a trip-rod for operating the same, substantially as shown, and for the purpose set forth. 20

4. In combination with a compound trip-rod, G, for the purpose set forth, a wrench or lever for moving one of the sections thereof, having a bifurcated head, one member extending beyond
25 the other and curved at its end to operate or depress a spring-catch employed for holding the trip-rod, substantially as shown, and for the purpose set forth.

In testimony whereof I affix my signature in
30 presence of two witnesses.

MANLY WILBUR.

Witnesses:

L. S. BOOTH,
W. B. JONES.

~~For 74x daylight~~

101

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~~For 74x daylight~~
Ex. 11.

DEFENDANT'S EXHIBIT 11.

R. J. THOMPSON.
DOG ATTACHMENT FOR LOG CARS.

Patented Nov. 26, 1889.

W. R. Davis.
C. Sedgwick

R. J. Thompson
Munn & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT J. THOMPSON, OF GRANDIN, MISSOURI.

DOG ATTACHMENT FOR LOG-CARS.

SPECIFICATION forming part of Letters Patent No. 416,128, dated November 26, 1889.

Application filed May 29, 1889. Serial No. 312,582. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. THOMPSON, of Grandin, in the county of Carter and State of Missouri, have invented a new and Improved Dog Attachment for Log Cars, Wagons, &c., of which the following is a full, clear, and exact description.

My invention relates to an improved dog attachment for log cars, wagons, sleds of all descriptions, and log-decks in saw-mills, and has for its object to provide a simple device whereby the logs may be effectually retained in position upon the body of the car or wagon or other log carrier or holder and expeditiously released therefrom at the proper time.

The invention has for its further object to provide a series of dogs so arranged that the said dogs may be raised or lowered simultaneously, and wherein the dogs upon either side of the body may be manipulated independently.

The invention consists of the novel construction and combination of the several parts, as will be hereinafter more fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the views.

Figure 1 is an end view of a log-car having my improvement applied thereto, and illustrating the dog in position to retain the logs upon the car; also illustrating a pivoted dog at one end of the bolster and a rigid dog at the opposite end. Fig. 2 is a side elevation of the bolster illustrated in Fig. 1, showing a dog in position to admit of the dumping of the logs. Fig. 3 is a plan view of the device, a slightly-modified form of bracket being shown. Fig. 4 is a side elevation of a bolster, illustrating a pivoted dog applied to both ends thereof; and Fig. 5 is a detail view of the manipulating-lever and the link-connection between the said lever and dog.

A represents the bolster of a car, wagon, or other log carrier or holder, illustrated in the drawings as forming a portion of a car-truck and as secured to the reach-beams B thereof. As the device is duplicated upon both the forward and the rear bolsters, I have shown its application to one bolster only.

In Fig. 1 the dog 10 is pivoted to the outer face of the bolster, near one end only, and the manner of pivoting the said dog consists of securing to the said outer face of the bolster an angle-bracket 11, the outer end of which is removed a slight distance from the contiguous face of the bolster, and a pivot-pin 12 is passed through the outer end of the bracket, through the dog at or near its center, and into the bolster. By forming the bracket in the manner shown one dog is forced outward to permit the logs to be rolled off, as illustrated in Fig. 2. The outward movement of the said dog, as shown in the drawings, is limited, as its lower end contacts with the under edge of bracket in order to form a skid to regulate the dropping of the log; but for or on log-decks or similar uses this movement would not be limited and the dog would be dropped entirely clear.

Upon one side of the center of the bolster A, upon the outer face of the same, an elbow or crank lever 13 is pivoted. The end of one member of the said lever is recessed upon both sides, as illustrated at 14 in Fig. 2, and likewise in Fig. 5, whereby a tongue 15 is formed of less thickness than the body of the lever, and one side edge of said tongue is cut away to form a shoulder 16. The base walls of the side recesses 14 of the lever are convex. The reduced end of the lever is connected with the lower extremity of the dog 10 by means of a link 17, one end of the said link being pivoted to the dog, and the other end is pivoted to the tongue of the angle or elbow lever 13. The inner side of the link, which is pivoted to the lever, is slotted upon its inner face to receive the tongue and provide a shoulder, as is shown in Fig. 5. By providing a rule-joint on this end between the elbow-lever and the link 17, when the member of the lever carrying the tongue and the link are brought downward slightly below a horizontal position, as illustrated in Fig. 1, the dog is forced to vertical position and the joint is locked. The elbow-lever, when one dog only is employed upon each bolster, is preferably manipulated through the medium of a rod 18, attached thereto, as shown in Figs. 1 and 2, which rod passes through suitable guides 19 to a point at or near the opposite end of the bolster and is

made to terminate in a handle 20. When a single pivoted dog is employed upon each bolster at the opposite end, a fixed dog 21 is located. In manipulating the pivoted dog, when the rod 18 is pulled outward, the member of the elbow-lever carrying the tongue is brought to a vertical position, whereby the link is borne forward and the dog depressed. When the dog is in this position, the logs may be readily rolled off, or if the car or other carriage is standing on an incline the logs roll off by gravitation and unloading is greatly facilitated. By pushing the rod 18 inward the member of the elbow-lever pivoted to the link and likewise the link are forced to the position shown in Fig. 1, and the lower end of the dog is forced outward, whereby the latter is carried to the vertical position and locked in such position, effectually holding the logs upon the carriage in place.

In Fig. 4 I have illustrated a pivoted dog located at each end of the bolster. The elbow-lever of each of the dogs is connected by a chain or rope 22, upon which chain or rope, near each lever, I usually provide a ring 23, whereby either of the dogs may be manipulated independently. By drawing downward upon the rope or chain 22 at the center both dogs are simultaneously carried downward to the open position; but if the ring to the right is drawn upon, the left-hand dog only will be thrown down, or vice versa. When a chain is employed, as shown in Fig. 4, the dogs are forced to a locked or vertical position by bearing against their outer edges or by pressing down the links 17.

This invention is equally applicable to the frames of trucks or wagons carrying round

packages—such as barrels, casks, &c.—and will effectually retain the load upon the vehicle and admit of the convenient and expeditious discharge therefrom.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the bed of a vehicle, of a dog pivoted thereto, an operating-lever, and a link pivoted to the said dog and attached to said lever by means of a rule-joint, substantially as shown and described.

2. The combination, with the bed of a vehicle, of a dog pivoted thereto, an elbow-lever, a link pivoted to the elbow-lever and to the dog, and means for operating the said elbow-lever, substantially as described.

3. The combination, with a bolster or cross-beam of a log carrier or holder or other vehicle, of a dog pivoted thereto extending above the same, an elbow-lever, a link pivoted to the dog and connected to one member of the said lever by a rule-joint, and means, substantially as shown and described, for manipulating the lever, as and for the purpose specified.

4. The combination, with the bolster or cross-beam of a log carrier or holder or other vehicle, of a bracket secured thereto having one outwardly-curved end, a dog pivoted between the curved end of the bracket and the bolster, an elbow-lever, a link pivoted to the dog and connected with one member of the elbow-lever by a rule-joint, and means, substantially as shown and described, for manipulating the lever, as specified.

ROBERT J. THOMPSON.

Witnesses:

WM. H. CATERN,
GEO. K. SMITH.

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103

Single Copy #2.

DEFENDANT'S EXHIBIT 12.

(No Model.)

G. W. WARNER.

LOCK FOR STANDARDS OR DOG ATTACHMENTS OF LOGGING CARS.

No. 556,230.

Patented Mar. 10, 1896.

Fig. 1.

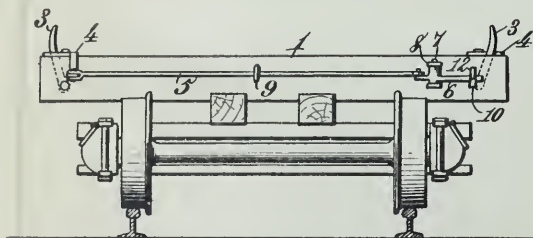


Fig. 2.

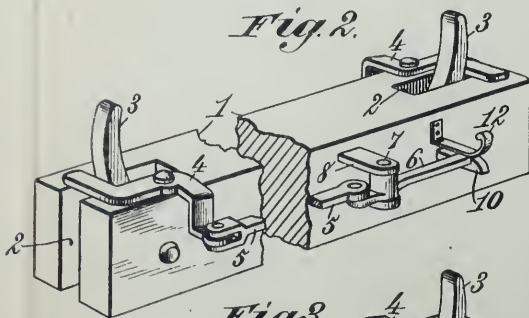
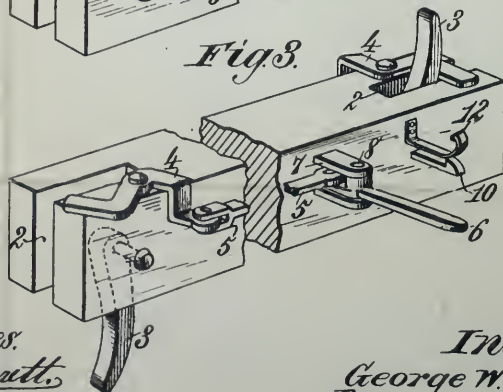


Fig. 3.



Witnesses:
Robert Smith.
Geo. M. Ma.

Inventor:
George W. Warner.
By *James L. Norris.*
Atty.

UNITED STATES PATENT OFFICE.

GEORGE W. WARNER, OF ROLFE, PENNSYLVANIA, ASSIGNOR OF ONE-HALF
TO LUCIUS C. THOMPSON, OF SAME PLACE.

LOCK FOR STANDARDS OR DOG ATTACHMENTS OF LOGGING-CARS.

SPECIFICATION forming part of Letters Patent No. 556,230, dated March 10, 1896.

Application filed January 10, 1896. Serial No. 574,998. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. WARNER, a citizen of the United States, residing at Rolfe, in the county of Elk and State of Pennsylvania, have invented new and useful Improvements in Locks for the Standards or Dog Attachments of Logging-Cars, of which the following is a specification.

This invention relates a lock for the standards or dog attachments of logging-cars, and has for its object to provide a simple and effective means for preventing the standards from being jolted out of a raised position and to permit release and dropping of the standards when it is required to dump the load.

The invention consists in the combination, with a pivoted standard, of an angle-lever fulcrumed to the ear in position to engage with and lock or trip the standard, as required, and a jointed operating-lever adapted to secure the said angle-lever or trip in its locked position.

The invention also consists in features of construction and novel combinations in the parts of a locking mechanism for the standards of logging-cars and other vehicles, as hereinafter described and claimed.

In the annexed drawings, illustrating the invention, Figure 1 is an end elevation of a car provided with my improved logging attachments. Figs. 2 and 3 are detail perspective views.

The car, wagon, or other log-carrier is provided at or near its ends with cross-beams or bolsters 1, as usual. In the ends of these bolsters 1 are open-ended slots or mortises 2 in which the standards 3 are pivoted. On the top of the bolster and at one side of each slot 2 is fulcrumed an angle-lever 4, one arm of which is adapted to extend across the top of the slot and at the outside of the raised standard 3 in such manner as to hold the standard upright and thereby retain the lumber, logs, or other material upon the car, so that the load cannot roll off. The other arm of the angle-lever 4 is extended downward at one side of the bolster 1 and formed with a horizontal projecting lug for pivotal connection with the bifurcated end of a link or lever section 5, the other end of which pivotally connects with one end of an operating lever

or handle 6 fulcrumed on a vertical pivot 7 in bearings 8 that project from the bolster. A guide 9 may be provided for the link or lever section 5, if preferred.

When the lever-handle 6 is turned outwardly the angle-lever 4 will be swung away from the slot 2 so as to permit the standard 3 to fall, and while the standards 3 on one side of a car are in this lowered position the logs may be quickly and easily rolled off from the car.

After the standards 3 are turned upward in the open-ended slots of the bolsters, they can be securely locked by throwing the lever-handles 6 toward or parallel with the bolster, thus swinging the locking angle-levers 4 across the slots 2 and at the outside of the several standards. In the locked position of the angle-lever 4 the sections 5 and 6 of the jointed operating-lever will be extended or in alignment with each other, and the end of the handle-section 6 will engage a hook 10 projecting from the bolster 1, a spring 12 being preferably arranged above and in bearing contact with the top of the hook 10 so as to assist it in retaining the lever-handle 6 and thereby prevent the standard and its locking and trip lever 4 from being jolted or jarred out of position by movements of the car. The outer end of the spring 12 is so formed that it will readily yield to permit engagement of the lever-handle 6 with the hook 10 and immediately return to its bearing on the hook projection when the lever has passed behind the same.

By pulling the lever-handle 6 outward from its engagement with the hook 10 and spring 12 the locking and tripping angle-lever 4 will be swung away from the slot 2 and permit the standard to fall. If it is desired to throw the angle-lever 4 to its locking position from the side of the car, it may be acted on directly, so that it will in turn act on and extend the lever-sections 5 and 6, the yielding of the spring 12 permitting the handle-section 6 to readily engage with the hook 10, thereby locking the several levers securely. The operating-lever being formed in two sections 5 and 6, having a jointed connection with each other and with the angle locking-lever 4, the latter is readily thrown square across the slot

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justable upon the bolster, a plate secured to
the chock and coöperating with the bolster to 60
prevent vertical displacement of said chock,
and a toothed bar adapted to coöperate with
said plate to hold the chock in an adjusted po-
sition, substantially as specified.

4. In combination, a bolster, a chock ad- 65
justable thereon, a toothed bar coöperating
with said chock to secure it in an adjusted po-
sition, and an eccentric for imparting a simul-
taneous longitudinal vertical movement to the
toothed bar, substantially as set forth. 70

5. In combination, a bolster, a chock ad-
justable thereon, a toothed bar for securing
the chock in an adjusted position, means for
imparting a longitudinal movement to said
toothed bar, and pins and cam portions for 75
imparting vertical movement to the toothed
bar simultaneously with its longitudinal move-
ment, substantially as set forth.

6. In combination, a bolster, a chock ad-
justable thereon, a toothed bar for securing 80
the chock in an adjusted position and having
depressions or cut-away portions with one
edge inclined, pins for supporting the toothed
bar and adapted to coöperate with the inclined
edges of the cut-away portions to effect posi- 85
tive movement of the toothed bar, and oper-
ating means for the latter substantially as
specified.

7. In combination, a bolster, plates having
portions projected above said bolster and hav- 90
ing inner longitudinal extensions, a chock ad-
justable on the bolster, a plate secured to the
under side of the chock and underlapping said
inner longitudinal extensions, and a toothed
bar for securing the chock in an adjusted po- 95
sition, substantially as specified.

8. In combination, a bolster, plates secured
to the sides of the bolster and having edge
portions projected upward therefrom, bars at
the inner sides of said plates, a chock adjust- 100
able upon the bolster, a plate secured to the
chock and underlapping said bars to prevent
casual displacement of the chock, a toothed
bar adapted to receive a longitudinal and a
vertical movement for securing the chock in 105
an adjusted position, and an eccentric jour-
naled to the aforesaid plates and adapted to
impart movement to the toothed bar, substan-
tially as set forth.

In testimony whereof I affix my signature in 110

2, so that it will support the raised standard 3 securely and obviate any liability of its being jolted out of place.

It will be understood that the spring 12 may be dispensed with, if desired, the hook 10 being capable of serving as a catch for the lever-handle 6, either with or without the aid of a spring.

With pivotal standards on both ends of the 10 bolsters, the operating-levers of the respective locking devices 4 will be arranged on opposite sides of the bolsters and will be extended a sufficient distance so that the unlocking of the standards on the right can be 15 effected from the left side of the car and the unlocking of the standards on the left be controlled from the right side of the car.

The locking and tripping devices described can be readily applied to any ordinary side- 20 dump-car or to log-carriages, wagons, or other vehicles provided with pivoted standards for retaining logs or other materials.

What I claim as my invention is—

1. The combination with the bolster having 25 in its end a vertical open-ended slot, and the standard pivoted in said slot, of a locking and tripping angle-lever fulcrumed at one side of the slot and having one arm adapted to extend across said slot to secure the lifted 30 standard, a two-part jointed operating-lever

connected with the other arm of said angle-lever, and means for securing the operating-lever to hold the angle-lever in place, substantially as described.

2. The combination with the bolster having 35 in its end a vertical open-ended slot, and the standard pivoted in said slot, of a locking and tripping angle-lever mounted on the bolster and having one arm adapted to extend across the bolster-slot outside the raised standard, 40 a two-part jointed operating-lever connected with the angle-lever, and a hook to secure the handle portion of the operating-lever, substantially as described.

3. The combination with the bolster having 45 a slot in its end, and a standard pivoted in said slot, of the locking and tripping angle-lever adapted to hold the standard in a raised position, the two-part jointed operating-lever 50 connected with the angle-lever, and the hook and spring for securing said operating-lever, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE W. WARNER.

Witnesses:

L. C. THOMPSON,
JOHN S. LATCH.

support the raised standard
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tripping devices described
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 other materials.

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 part jointed operating-lever

connected with the other arm of said angle-
 lever, and means for securing the operating-
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 stantially as described.

2. The combination with the bolster having 35
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 and having one arm adapted to extend across
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 lever adapted to hold the standard in a raised
 position, the two-part jointed operating-lever
 connected with the angle-lever, and the hook 50
 and spring for securing said operating-lever,
 substantially as described.

In testimony whereof I have hereunto set
 my hand in presence of two subscribing wit-
 nesses.

GEORGE W. WARNER.

Witnesses:

L. C. THOMPSON,
 JOHN S. LATCH.

And afterwards, to wit, on the 19th day of January, 1915, there was duly filed in said Court, and cause a Praecipe for Transcript, in words and figures as follows, to wit:

Praecipe for Transcript.

To the Clerk of the above entitled court:

You are requested to incorporate the following portions of the record in the transcript on appeal in the above entitled case: Complaint, answer, decree, statement of evidence with exhibits attached, order extending time for transmitting transcript on appeal to Feb. 1, 1915, Petition for and Order allowing appeal and undertaking, order directing original of plaintiffs' exhibits C. E. and F and of defendants' exhibit 6 to be transmitted, and assignment of errors.

STAPLETON & SLEIGHT and
JOS. L. ATKINS,

Attys for Plaintiffs.

Service accepted this 18th day of January, 1915.

W. R. LITZENBERG.

Filed January 19, 1915. G. H. Marsh, Clerk.

And afterwards, to wit, on the 19th day of January, 1915, there was duly filed in said Court, and cause, a Stipulation to send original exhibits to Court of Appeals, in words and figures as follows, to wit:

Stipulation.

It is hereby stipulated that the original of plaintiffs' exhibits C, E and F and of defendants' exhibits 6 may be transmitted to the Circuit Court of Appeals with the transcript herein, the same requiring the inspection of the court.

STAPLETON & SLEIGHT &
JOS. L. ATKINS,
Attys. for Plaintiffs.

W. R. LITZENBERG,
Attys. for defendants.

Filed January 19, 1915, G. H. Marsh, Clerk.

And afterwards, to wit, on Tuesday, the 19th day of January, 1915, the same being the 68th Judicial day of the Regular November, 1914 Term of said Court; Present: the Honorable CHARLES E. WOLVERTON, United States District Judge presiding, the following proceedings were had in said cause, to-wit:

Upon stipulation of the parties, it is Ordered that the original of plaintiffs' exhibits C. E and F and of defendants' exhibit 6 be transmitted to the Circuit Court of Appeals with the transcript on appeal herein.

CHARLES E. WOLVERTON.
Judge.

Filed January 19, 1915, G. H. Marsh, Clerk.

United States of America,
District of Oregon,—ss.

I, G. H. Marsh, Clerk of the District Court of the United States for the District of Oregon, do hereby certify that I have prepared the foregoing transcript of record on appeal in the case in which Clayton T. Eaid and Joseph A. McConnell are Appellants, and Twohy Bros. Company, a corporation, The Northwestern Equipment Company, a corporation, and Elbert G. Chandler are Appellees, in accordance with the law and the rules of this Court, and in accordance with the praecipe of the appellant filed in said case, and that the said record is a full, true and correct transcript of the record and proceedings had in said Court, in accordance with said praecipe, as the same appear of record and on file at my office and in my custody;

And I further certify that the cost of the foregoing record is \$, for Clerk's fees for preparing the transcript of record and \$ for printing said record, and that the same has been paid by said appellants.

In testimony whereof I hereunto set my hand and affix the seal of said Court, at Portland, in said District, on the day of 1915.

Clerk.

